1990/91 Membership Handbook

$9.95

ROAR

RADIO OPERATED AUTO RACING, INC.

Setting the Pace for R/C Racing

TRINITY®
2 TIME IFMAR WORLD CHAMPIONS

Trinity's Statistics:

•1985 IFMAR World Champions•
•1987 IFMAR World Champions•
•1984 All Japan Champions•
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We care about the hobby!

TRINITY PRODUCTS INC.
1901 E. Linden Ave. #8
Linden, N.J. 08036
Ph: (201) 862-1705
Fax: (201) 862-6875
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TM

Welcome!

It is my pleasure to introduce you to Radio Operated Auto Racing, Inc. The volunteers and employees of R.O.A.R. are dedicated to serving our members and affiliates through fair, progressive, and consistent rule interpretation and policy enforcement at our sanctioned events.

Throughout the U.S. and Canada, the various states and provinces are grouped into Regions, each headed by an elected Director. When rules need interpreting or clubs need help in sanctioning matters, a Region Director or one of his assistants is available to make the call.

On the National level, we have the offices of Vice President, Executive Committee, Administrator, National Scale Director, Committee Member on a host of strategic committees, and my office of President. These are the policy makers, the program leaders, and the ones charged with keeping the lines of information and communication always open.

At the very heart of R.O.A.R.'s organizational chart is its affiliated clubs. It is here, at weekly sanctioned events, that you will become acquainted with our rules and policies. Learn them well. Although intimidating even when equally applied, R.O.A.R. rules are fair and very consistent.

Again, Welcome to R.O.A.R. and Good Luck in Your Racing!

Eric S. Gudger

ERIC S. GUDGER
R.O.A.R President

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The purpose of the rules and/or regulations set forth herein is to establish a consistent basis for the racing of radio controlled cars at R.O.A.R. sanctioned events, to provide orderly conduct of these sanctioned events, and to establish minimum requirements at these sanctioned events. This is to insure that rules are fairly and equally applied at all R.O.A.R. sanctioned events.

These rules will govern the condition of all R.O.A.R. sanctioned events, and by participation in or by making application to participate in these events or by making application to have products approved in these events, R.O.A.R. members, participants, manufacturers, and race promoters are deemed to have complied or agree to comply with these rules and/or regulations.

R.O.A.R. may act at any time during the preparation of a sanctioned event, during the event, or after the event to change anything that R.O.A.R. believes will be in the best interest of the sport and/or the Corporation. This includes denying or removing an event from the sanctioned event category.

No implied or expressed warranty or safety shall result from publication of or compliance with these rules and/or regulations. They are intended as a guideline for the conduct of the sport and are in no way a guarantee against injury of any sort to participants, spectators, or others.

Specifications and/or suggested standards contained in this rule book are intended for use as a guide with respect to safety and for no other purpose, either expressed or implied. Their use by any association, or organization, manufacturer or individual is entirely voluntary and R.O.A.R. will accept no responsibility for consequences resulting from their application.

R.O.A.R., its members, officers, directors, or staff, assume no responsibility, legal or otherwise, for failure or malfunction of any product or equipment used at a R.O.A.R. sanctioned event or built to these rules and/or regulations.

A R.O.A.R. sanctioned event is a sporting event. For any decision R.O.A.R. will always consider the sporting interest before anyone's financial interest, including the organizer's interest.

R.O.A.R. is not liable for the actions or decisions made by individuals, promoters, or organizations, etc. using R.O.A.R. rules.

R.O.A.R. rules are the sole property of R.O.A.R. Use of these or previous rules by any organization or individual without the consent of R.O.A.R. is strictly forbidden.

These rules supersede all previous editions of R.O.A.R. rules.

R.O.A.R. is the only body entitled to make official the results of a R.O.A.R. sanctioned event.

All rights reserved by R.O.A.R.

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R.O.A.R. OFFICIALS

PRESIDENT
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SECRETARY
_____
_____
_____
_____

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1/10 OVAL NATIONAL DIR.
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3720 Easton Drive, Unit #6
Bakersfield, CA 93309
(805) 323-0471 (days)

1/10 MONS. TRUCK NAT'L DIR.
_____
_____
_____
_____

R.O.A.R. REGION DIRECTORS

REGION 1 DIRECTOR
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REGION 8 DIRECTOR
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Honolulu, HI 96822
(808) 737-9582 (days)

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Halifax, NS Canada B3L 4J7
(902) 455-5094 (evenings)

REGION 11 DIRECTOR
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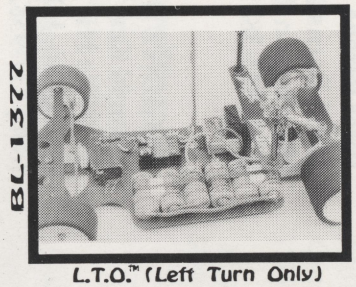
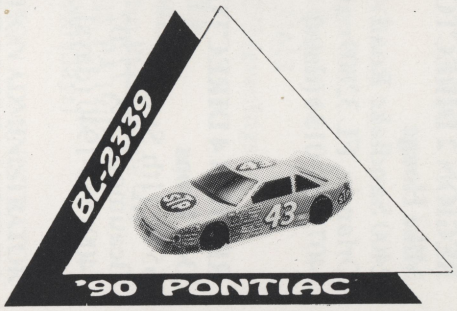
200 Galleon Drive
Anchorage, AK 99515
(907) 345-3269 (evenings)

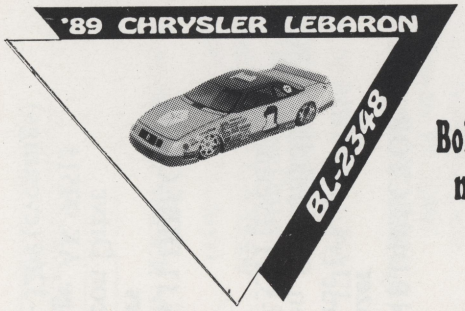
ROAR MEMBERSHIPS
9305 N. 56th Street
Suite 189
Temple Terrace, FL 33617

BoLINK'S NAT'L CHAMPIONS



L.T.O.™ (Left Turn Only)





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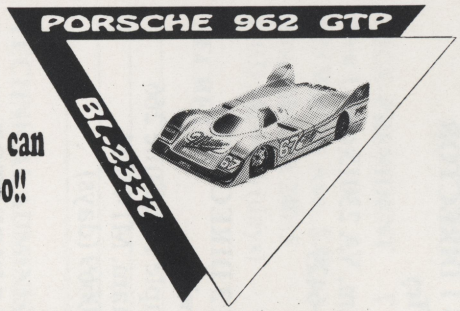

Others **TALK** about having the Best Bodies in the business...Our performance on the track speaks for itself!

For a complete catalog send $3 to: BoLINK R/C Cars(RR), 420 Hosea Road, Lawrenceville, Ga. 30245; (404) 963-0252

Your License to Have Fun!

Please detach and fill out completely. Include current **ROAR** *number.*

1990 R.O.A.R.

PLEASE TYPE OR PRINT CLEARLY

☐ **New Member** ☐ **Renewal** ☐ **Individual Member** ☐ **Family Member** ☐ **Address Change** ☐ **Rulebook** ☐ **Duplicate Card** ☐ **Newsletter**

LAST NAME _____ FIRST NAME _____ M.I. _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

ROAR # _____ $ _____ AMOUNT ENCLOSED PHONE (_____) _____

☐ 1/12 **ON ROAD** ☐ 1/10 **ON ROAD** ☐ 1/10 **OFF ROAD** ☐ 1/10 **DIRT OVAL** ☐ 1/8 **GAS** ☐ **DRAG**

ROAR # _____ LAST NAME _____ FIRST NAME _____ M.I. _____

ROAR # _____ LAST NAME _____ FIRST NAME _____ M.I. _____

ROAR # _____ LAST NAME _____ FIRST NAME _____ M.I. _____

FOR OFFICE USE ONLY

CHECK # _____ PC _____

As a ROAR Member, I agree to abide by all ROAR rules and safety regulations.

Signature _____

☐ Duplicate Card ..... $ 2.00

MEMBERSHIP

☐ Individual Membership ... $25.00

☐ Family Membership $25.00

Each Additional Member $10.00

RULEBOOKS (new or renewing members included)

☐ Current Member ..... $ 5.00/EA

☐ Nonmember ..... $ 9.95/EA

NEWSLETTER

☐ Affiliated Officers & Patrons Newsletter .. $15.00/YR

POSTAGE

☐ Second Class Postage for Members with a U.S. Address ..... INCLUDED

☐ First Class Postage for Members with a U.S. Address ..... $ 8.00

☐ Canada and Mexico Addresses (First Class Airmail) ..... $ 8.00

☐ All Other Addresses (First Class Airmail) $15.00

☐ VISA ☐ MasterCard Exp. Date __ __/__ __

Acct. # _____

R.O.A.R. Memberships
9305 N. 56th St. - Suite 189
Temple Terrace, Florida 33617

PAYMENT TERMS

Membership applications and renewals which are not accompanied by the correct amount will be held until the correct funds are received. Payments must be drawn in U.S. funds only.

GENERAL REGULATIONS

G1: Any separation of rules and/or regulations into categories is strictly for the convenience of ROAR and in no way limits or excludes any rule and/or regulation.

G2: Any rule and/or regulation listing an Official is indicating the lowest authority level given by ROAR to take this action. This does not limit or restrict a higher ROAR Official from imposing a similar, overriding, and/or immediate action.

G3: In addition to the rules, regulations, technical specifications, special rules, and/or supplemental regulations mentioned herein, ROAR issues and maintains specific procedures for adherence by promoters, track owners, manufacturers and/or affiliated clubs at ROAR Sanctioned Events and procedures governing ROAR approved products submitted to it by any past, present and/or future individual and/or firm.

G4: It is the full responsibility of entrants, drivers, owners, and sponsors to meet all ROAR specifications and rules contained herein and/or issued from ROAR.

G5: Failure to comply with any of these rules and/or regulations may result in penalty or disqualification by the Race Director and/or ROAR official(s).

G7: Special rulings may be made by ROAR to account for conditions due to the location of the event, the condition of the course, or any circumstance requiring such a ruling.

G8: ROAR assumes no responsibility whatsoever for delays, postponements and/or cancellations of all and/or part of an event because of inclement weather, equipment failure, and/or any other reason.

G9: Special rulings issued from ROAR will be considered as official amendments to this list of rules, regulations, and specifications.

G10: Special rulings or changes in technical specification will not be in effect in any category of a class until such rulings or changes are issued from ROAR in bulletin form.

G11: Supplemental regulations may be issued from ROAR for each event as necessary to amend, suspend, or modify existing rules and regulations.

G12: No entrant, pit crew member, or sponsor will have any claim for damages, expenses, lawsuits, or otherwise against promoter, track operator, ROAR, its officials, agents, or employees arising from damage to any vehicle, personal injury, or monetary loss of any kind whatsoever. Entrants, pit crew members, and sponsors waive any claim they may have against promoter, track operator, ROAR, or officials when they participate in any racing activity conducted under these rules.

G13: The promoter or track operator may run any type event approved and sanctioned by ROAR.

G14: Only the Executive Committee can issue sanctions for any ROAR National Championship. The wording "ROAR National" can not be used with any event that has not been so sanctioned by the Executive Committee.

OFFICIALS

G15: Officials generally required to conduct an event are: (a) Chief Scorer, (b) Frequency Director, (c) Race Director, (d) Registrar, (e) Technical Director, (f) Track Steward, and/or (g) Pit Steward. In some cases one (1) individual may perform multiple responsibilities.

G16: The Race Director will have the authority to penalize and/or disqualify any entrant for the violation of these rules, including but not limited to the special rulings and supplemental regulations described in G10 and G11.

G17: The designated ROAR authority will have overall responsibility for the conduct of an event conducted under these rules and regulations.

G18: Official race personnel will be directly responsible to the designated ROAR authority. Any finding, penalty, and/or disqualification assessed by the highest ranking ROAR authority, at the event, is final.

G19: No one falling under the jurisdiction of any Race Official will subject said official(s) to improper language or other demeaning actions.

G20: For an event's procedural rulings and policies, the chain of command and authority, from lowest to highest, is: (1) Race Official; (2) Race Director; (3) ROAR Official; (4) ROAR Event Committee.

G21: For an event's technical rulings and/or regulations, the chain of command and authority, from lowest to highest, is: (1) Race Official; (2) Technical Advisor; (3) Race Director; (4) ROAR Official; (5) ROAR Technical Committee; (6) ROAR Event Committee.

SAFETY

G22: The safety of the spectator is of prime importance and must be considered when laying out tracks and spectator areas. A positive means of stopping a car must be provided between the track area and any area accessible to anyone, including spectators, drivers, officials, or pit crews. The consideration for selecting this barrier will be the protection of the individual and not the protection of the cars. Barriers will be supported in such a manner that sharp contact will not cause them to fall over or become ineffective, thus allowing cars to pass through an opening. Barriers of other materials are acceptable as long as they exhibit equal or superior strength. Any Barrier shall be in good condition, not deteriorated by weather or other causes. No device may be used on a high speed portion of the track or at the end of a high speed straightaway which may cause a car to be launched upward if struck. Plow discs will only be used at low speed turns and not at the end of high speed straightaways. Permanent features of the race site, such as curbs or grassy areas, may be utilized. In addition, spectator control will be established at least four (4) feet, more if required, outside the barriers. Minimum acceptable barrier specifications are listed in each scale rule.

G23: The safety of the officials, entrants, and mechanics is of equal importance, but it is assumed that they are more aware of any potential danger. Barriers similar to those in the specific scale rules will be provided between the racing surface and the area used for pits and drivers' stand. Sufficient barriers will also be provided for

those officials who must occupy relatively fixed positions near the racing surface.

G24: All participants, mechanics, officials, and their families will wear closed toe shoes while at the race site. This includes the pits as well as the race track. Spectators behind the spectator control barrier are not included in this requirement. It does apply to anyone, including spectators, in the pit area.

G25: Disabled cars will be taken off the track. No repair work will be allowed on the track or the infield while the cars are running and/or a race is taking place.

G26: No driver may operate a car while they are standing outside of the designated area.

G27: All races require a Track Steward who will see that all drivers, pit crew members, or spectators are in a safe position while the cars are on the track.

G28: Prior to operating a car, all drivers must sign in and give officials the radio frequency that will be used. Any change in frequency must be approved by the Frequency Director.

G29: Any driver racing or working on a car, with the radio "on", must have the appropriate frequency clip attached to the radio antenna and/or approval from the Frequency Director.

G30: Driver must turn "on" their radio transmitter before turning their car "on" or "starting" their engine. Driver must also turn "off" their car or engine before turning their radio transmitter "off". All fuel powered cars on the track or in the pits must be contolled by a working radio, be on a test stand, or be in the Hot Pit.

G31: Each vehicle's steering system may be inspected for safe condition by the Technical Director.

G33: The racing activities may vary but they must always display the maximum safety for all individuals including spectators, racers, pit crew members, and Officials.

TRACK SPECIFICATIONS

G34: Linking of portable barriers should be accomplished in such a manner as to present a surface toward the track which will not damage a car if it should make contact in a glazing manner while proceeding around the track. Over lapping is away from the direction of travel.

G35: A positive means of stopping a car must be provided as specified in the safety regulations and the scale specifications.

G36: Supplemental barriers sufficient to stop a car will be placed in any area where swinging wide or loss of control could result in a car being sent beyond the outer retaining wall. Such barriers should be no closer than 18" to any portion of the racing surface.

G37: It is recommended that the entire outer track be marked by a stripe. Specific recommendations in class rules.

G38: Lanes will be sufficiently separated by either natural or artificial barriers to

prevent cars from crossing onto oncoming traffic.

G39: Corner cutting may be discouraged by placing tapered boards, highway dots, or similar deterrents approximately 6" inside the inner boundary turn markings. Such devices will not be higher than 2" while tapered to allow cars to ride over them. They should be firmly secured to prevent movement onto the racing surface.

G40: A driver's area will be provided and arranged so as to give all drivers essentially equal view of the track during practice and competition. Two and one-half (2 1/2) feet of space per driver is the recommended minimum. It is highly recommended that a handicapped area be provided.

G41: Elevated driver's stands may be used provided all drivers have an equal opportunity to use such stands. They will be constructed in such a manner as to afford safety to each competitor. Flooring material will be secured and capable of holding all drivers. A railing or other safety device is recommended for any stand over 18" above the ground. If stairways are required, they will be constructed along with the drivers stand to meet all local safety codes.

SURFACES

G42: Water jumps, water obstacles, water hazards, or any other type of water puddle is not allowed.

G43: On-Road: Track surfaces will be asphalt or coarse finished concrete with smooth expansion joints for outdoors and nylon-free carpet for indoor events. Race direction will be clockwise for road course and counter-clockwise for oval events. A change in race direction is permitted if notification is included on the flyer.

G44: Off-Road: Dirt road course. Race direction is optional.

G45: Dirt Oval: Dirt oval course. Race direction will be counter-clockwise.

ENTRANTS

G46: Only current ROAR members in good standing will participate in ROAR sanctioned races or events. Every driver entered in a ROAR sanctioned event will present proof of ROAR membership.

G47: After confirmation from ROAR, the Race Director reserves the right to refuse any entry application.

G48: No entrant will enter the working pit area or race area without first presenting a valid ROAR card to the Registrar.

G49: An entrant who enters a Production or Sportsman class will not be eligible to enter another class. Excluding Production or Sportsman classes, entrants at Level three (3), four (4), or five (5) events are limited to one (1) class if only two (2) classes are offered. If three (3) or more classes are offered, entrants are limited to two (2) classes.

G52: All entrants should attend the Driver's Meeting. Starting procedures will be announced or covered during the Driver's Meeting.

G53: An entrant will not permit another individual to compete for them in a race.

G54: At no time during an event may a non-entrant operate a vehicle on the track.

G55: No person under suspension by the Executive Committee will be permitted to participate or be allowed to enter the working pits or race area.

G56: At all times the racer/entrant assumes responsibility for the actions of his pit crew.

REGISTRATION

G57: Upon arrival at the race site, entrant will report to the Registrar. No entrant may enter racing areas until he has signed all releases, registrations, and/or entry forms. No person will sign the release form for someone else.

G58: Race Central and event scoring areas are restricted to race officials only. No unauthorized individual will be permitted in these designated areas.

RADIO EQUIPMENT

G59: Operation of radio equipment must conform to applicable FCC regulations. FCC license must be presented if required for the frequency being used. Use of ANY, transmitting device must be approved by the Frequency Director.

G60: All participants must use their assigned frequency. Any frequency change must be approved by the Frequency Director. No use of reversed crystals, or other than authorized or assigned frequency.

G61: Transmitter(s) will display only the color(s) appropriate to the frequency in use. Transmitter(s) should have changeable frequency. Radio transmitter is limited to the original manufacturer's recommended voltage for the power pack.

G62: Any FCC legal transmitter or receiver may be used; but, they are limited to use of a maximum of two channels of the receiver operating two servos or any combination of one servo and one electronic speed control or similar device. More than one function is allowed per device; but, servo is limited to one (1) output shaft. Control is limited to forward, brake, and steering.

(G63:) FREQUENCIES

27 MHz

Brown	**26.995**	Orange	**27.095**	Green	**27.195**
Red	**27.045**	Yellow	**27.145**	Blue	**27.255**

75 MHz

62	**75.430**	72	**75.630**	82	**75.830**
64	**75.470**	74	**75.670**	84	**75.870**
66	**75.510**	76	**75.710**	86	**75.910**
68	**75.550**	78	**75.750**	88	**75.950**
70	**75.590**	80	**75.790**	90	**75.990**

(G64:) Frequencies Requiring a FCC Amateur Radio License

50MHz

RC00	**50.800**	**RC06**	50.920
RC02	**50.840**	RC08	**50.960**
RC04	**50.880**		

53 MHz

Black-Brown	**53.100**	Black-Green	**53.500**
Black-Red	**53.200**	Black-Blue	**53.600**
Black-Orange	**53.300**	Black-Violet	**53.700**
Black-Yellow	**53.400**	Black-Grey	**53.800**

TRANSMITTER IMPOUND

G65: At the time of site registration, the entrant's transmitter will be impounded and placed under the control of the Frequency Director. Upon arrival at the race site on subsequent days of a multiple day event, the entrant's transmitter will be impounded and placed under the control of the Frequency Director. Transmitters will be released at the end of the day's activities or if the entrant is leaving the race site.

G66: Transmitters may be released from the impound area only with the permission of the Frequency Director. Transmitter battery packs may be removed for charging.

G67: The Frequency Director will provide: (a) protected and secured storage for impounded transmitters, (b) procedures to insure that impounded transmitters are turned off, (c) procedures to insure an orderly dispersal of transmitters released by the Race Director for racing use, and (d) procedures to insure that no more than one transmitter on any one frequency is released from impound in any race.

G68: ROAR assumes no responsibility for impounded transmitter, although reasonable efforts will be made to insure their security.

FREQUENCY CONFLICTS

G69: In cases of frequency conflict, the higher qualified racer will have first right of frequency choice. Second highest qualifying driver will have second right of frequency choice. And so on. A driver who can not change to an open frequency does not race and is considered a "no show". As an example, racer "X" is on the yellow 27.145 MHz frequency and qualified for the "A" main event. Another racer "Z" is also on the yellow 27.145 MHz frequency and qualified in the "A" main event. But "Z" is qualified first and as such would get first choice of frequency. "Z" could elect to retain the yellow 27.145 frequency or choose any other FCC legal frequency which could cause another driver to change frequencies. The Race Director may elect to require racer "Z" to retain the yellow 27.145 MHz frequency if an unsportsmanlike act is judged to be transpiring by making another driver change frequencies.

TECHNICAL INSPECTION

G70: Each vehicle, regardless of class, must complete and satisfactorily pass the Technical Director's inspection before being allowed to participate.

G71: Technical inspection will be held prior to every race. All rules must be strictly adhered to. No car will be allowed to race until it has been cleared to do so by the Technical Director. Any violation will be corrected before the car is raced.

G72: First, second, and third place cars will be inspected immediately following the A main.

G73: ROAR reserves the right to subject any vehicle to a mechanical and/or visual

inspection at the discretion of the Technical Director. It is the responsibility of the driver or entrant to tear down a vehicle for inspection when requested to do so.

G74: ROAR reserves the right to limit admittance of personnel to any area in which inspections are being made.

G75: ROAR reserves the right to impound vehicles.

G76: ROAR assumes no responsibility for impounded vehicle, although reasonable efforts will be made to insure their security.

G77: During post race inspection, race distortion or damage will be disregarded. However, add on ballast must remain attached to pass post race inspection.

See Competition Regulations, Electric Rules, Fuel Rules, Scale Specifications, and Scale Drawings for additional rules and/or regulations.

PARMA *Cyclone II*

HAND OUT STOCK MOTORS

ATTENTION RACE DIRECTORS

"CYCLONE II" The Next Generation of R/C motors has landed at Parma International. The new "CYCLONE II" R.O.A.R. legal stock motor is available to your club as a handout stock motor.

These new motors have been proven to be the fastest and most consistent stock motor available.

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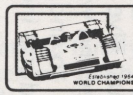

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COMPETITION REGULATIONS

C1: These regulations apply to all classes unless otherwise noted in the supplemental regulations. Unless the class requirement or safety regulations specifically state that a modification or optional equipment is permitted, it will not be allowed. ROAR's intent when prescribing specifications for safety equipment for vehicles that will compete under ROAR rules is to provide adequate protection to all entrants and spectators. ROAR does not intend to restrict the general or specific design of any vehicle or the development of competitive vehicles, but does wish to encourage all entrants to give full attention to safety requirements. Any deviation from ROAR rules and/or regulations at any ROAR sanctioned event will be subject to written approval of the Race Director and ROAR in advance of the event.

C2: All cars must comply with dimensional requirements furnished in the Scale Specifications and the Scale Drawings. Scale drawing dimensions fine tune the requirements and override all other dimensions.

C3: A suitable, weatherproof emergency kit, composed of individual packaged supplies should be at the race site.

C4: At each event where fuel propelled cars are raced or demonstrated, functioning portable UL approved 2 1/2 pound maximum ABC rated dry chemical or halon fire extinguishers equipped with a capacity gauge must be in the pits and at the track.

C5: Auxiliary battery pack to power only a vehicle's radio equipment may be used.

C6: Batteries must be securely mounted.

C7: No roll-over antennas allowed unless noted in the scale rules.

C8: Unless specified in the scale specifications, NO multiple speed transmissions are allowed.

C9: Any material used for the purpose of adding to the vehicle's weight must be properly attached as a part of the vehicle's structure. Any such ballast that falls off the vehicle during a race, may not be re-attached after the race to meet post-race inspection.

C10: No hazardous front or rear bumper, nerf bar, frame, or other object protruding from the vehicle is allowed.

C11: Wheel nuts and/or axles will not protrude more than 1/16" beyond the outer edge of the wheel.

C12: It is the intention of ROAR to promote family oriented racing. With this in mind, unruly or unsportsmanlike conduct will not be tolerated. Individuals judged by the Race Director to be in violation will be requested to leave the race area.

PITS

C13: A working pit area will be provided outside the main racing surface, where repairs may be made. It must be separated from the race track by the restraining wall or barrier dimension noted in the scale specifications.

C14: A hot pit area may be provided outside of the working pit area and separated by

the restraining wall or barrier dimension.

TURN MARSHALLING

C15: Racers must turn marshall for the designated race. Another qualified ROAR member may substitute but only after receiving the Race Director's approval. The original turn marshall is responsible for the actions of the substitute.

C16: Race cars may not be repaired by the turn marshall.

C17: A car running on the track has the right-of-way over a car that has gone off the track, turned over, or otherwise had problems. Turn marshalls will treat all corrective matters equally.

C18: When marshalling a car, it should be returned to the point where it left the racing surface.

SCORING

C19: Classes offered are at the discretion of the promoter and ROAR.

C20: The maximum duration of an event or race will be set by the organizer and ROAR.

C21: Race lengths, not including the final lap, will be as specified in the class requirements or on the race entry form. The procedure will be the same regardless of the length of the race. Example: At the "X" minute mark of the race, the time signaling the end of the race will be announced via PA system, horn, or some other audio method. After this time has transpired, the Chief Scorer will credit the racer with the time and lap of the final lap. It is important to complete this final lap as it counts. If it is not completed, the racer will be credited with the number of full laps finished and the appropriate time for those laps.

In cases where two racers qualify with the same number of laps, the racer with the lower elapsed time is qualified higher.

C22: Qualifying position for the main event will be by grouping each class participant's fastest single qualifying score.

C23: A racer's official time will be the total laps completed by the race vehicle and the total time elapsed from the actual assigned starting time, as determined by the Chief Scorer, when the vehicle crosses the finish line on the final lap.

C24: The winner for each class will be the car/racer in the highest qualifying main that finishes with the most laps in the least elapsed time and meets all pertinent criteria after any penalty or sanction has been assessed.

G25: Every vehicle must leave the start area at its designated time and cross the finish line within the elapsed time allowed by ROAR to qualify as an official finisher. Failure of any vehicle to remain on course, whether for an advantage or not, subjects such entry to the short coursing penalty.

C26: For purposes of qualifying and racing, the racer/entrant is scored and not the vehicle.

C27: One driver for one car. A driver must race the car teched. Unless supplemented

by event rules and/or regulations a driver or a car may not be changed during a race.

C28: No car may be pushed across the finish line. It must cross under its own power. Non-operating car will be removed from the track.

C29: Barring an Act of God, a minimum of three (3) qualifying rounds will be used at level 3, 4, or 5 events.

C30: For Level 4 or 5 events an automatic scoring system will be used.

EVENT ELIGIBILITY

C31: To be eligible to enter a ROAR Level 3, 4, or 5 event in other than the Master's class, entrant must be a citizen of the USA or Canada or have resided within the USA or Canada for a minimum of three (3) months prior to the event.

C32: Entrants are required to meet qualifying and pre-entry requirements established by the promoter and/or ROAR.

REGIONAL CHAMPIONSHIPS

C33: Entrants will reside in the region for a minimum period of three (3) months. Regardless of current regional residency, members who have changed regions or run in another Regional Championship are limited to running in one (1) regional scale category per year.

C34: A member may petition the two (2) affected Region Directors thereby allowing a non-resident to run in a Regional Championship.

C35: Deviation to mass residency requirement is permissible upon authorization from the Region Director and the National Scale Director. This pertains to adjoining region residents only.

C36: Masters License holders are excluded from these regional requirements if they run in their own separate class.

C37: A Regional Champion will not come from the Masters class.

NATIONAL CHAMPIONSHIPS

C38: ROAR approved products lists, (motors, batteries, and bodies, and FCC listed frequencies), released thirty (30) days prior to a National event and only those items appearing on that list will be allowed. If deemed necessary by the Executive Committee, probationary or support classes or scales may be excluded from the thirty (30) day rule and/or regulation requirements.

C39: ROAR will designate those classes and scales which may receive a National Championship honor and/or sanction. Other classes or scales may be offered in support of the National program without receiving a National Championship title.

C40: At the Nationals, all A main motors will be inspected for legality immediately after the race.

LICENSES

C41: For purposes of separating drivers by intent, ROAR will maintain a General, a

Formula, and a Masters License division governed by supplemental regulations.

C42: At level 3 events Master card carrying entrants may be separated into their own distinct class(es). At level 4, or 5 events Master card carrying entrants will be separated into their own distinct class(es).

C43: The Masters class may be used for International entrants.

C44: Only citizens of the USA or Canada or residents of such for a minimum of six (6) months are eligible for Formula or Masters points.

BLACK FLAG

C45: A black flag will be given to a racer whose driving, car operation, and/or performance constitutes a hazard to the other car(s) in the race. This includes but is not limited to: unsportsmanlike driving, intentional hitting of other cars, intentional short coursing, intentional corner cutting, intentional blocking when being overtaken by faster cars while not racing for position, and other such acts.

C46: A black flag ruling may be used at any time for an racer's unsportsmanlike or abusive language to other racers and/or race officials.

C47: Any car which loses its body will be black flagged. It must be returned to proper position or replaced before the car is returned to the race.

DISQUALIFICATION

C48: Failure to comply with any of these rules and/or regulations, not limited to those items covered under Disqualification, may result in penalty or disqualification by the Race Director.

C49: An entrant failing to complete or sign the required registration forms and/or releases. Having an entry application, registration, release, and/or other ROAR form containing a falsified signature.

C50: An entrant's use of other than authorized or assigned frequency.

C51: An entrant having a transmitter in the race area without permission.

C52: Deliberate, abusive nerfing, or bumping will be reason for ten (10) second penalty or disqualification.

C53: An entrant subjecting Race Official(s) to improper language or other demeaning actions.

C54: An entrant allowing another individual to substitute for them in a race.

C55: An entrant ignoring a black flag.

C56: An entrant removing, not allowing, or not taking a race vehicle to an inspection area when requested to do so by a Race Official(s).

C57: Any entrant found to have a motor that does not comply with the rules and/or regulations will be disqualified.

C58: An entrant operating a vehicle near the track that is endangering entrants, race

officials, or spectators.

C59: Drinking of intoxicating beverages, use of illegal substances, or showing evidence of being under the influence of an intoxicating beverage or illegal substance in the pits, or the race area by an entrant or pit crew member during an event.

C60: An entrant taking part in a demonstration in the pits, on the track, or in the surrounding area before, during, or after a race or event.

C61: Entering Race Central or event scoring areas without proper authorization.

C62: Infractions will be witnessed by a Race Official and brought to the racer or entrant's attention before a penalty or sanction is assessed. Track infractions will be announced during the race. However, it is the racer or entrant's responsibility to observe track rules even if the infraction is not announced at the exact time it took place.

C63: Interpretation of all rules and/or regulations along with violations and penalties thereof are at the discretion of ROAR.

C64: Rules without reference or references made to a "racer(s)" indicate a disqualification from a race or class. References made to an "entrant" indicate a disqualification from the event.

C65: A racer or an entrant having been disqualified forfeits all entry fees and/or race points associated with appropriate class or entry.

C66: A racer or an entrant penalized or disqualified has the right to protest the decision of the Race Director to the assigned ROAR authority at the event. The decision of the highest ranking ROAR authority will be final.

C67: Any physical assault will cause suspension of ROAR membership for a minimum of ninety (90) days.

PENALTIES

C68: Failure to comply with any of these rules and/or regulations, not limited to those items covered under Penalty, may result in penalty or disqualification by the Race Director.

C69: Jumps starts carry a ten (10) second penalty in the qualifier and one (1) lap penalty in the main. If racer pulls over and allows all the other cars to pass before continuing, then no penalty is applicable.

C70: For corner cutting if the racer stops within the area of the infraction and allows the car that was immediately behind the racer when the corner was cut to pass before the racer returns to racing, then no penalty is applicable. The penalty for corner cutting is adding ten (10) seconds in the qualifier and a penalty of one (1) lap in the mains.

C71: No short coursing permitted. Penalty is loss of lap associated with portion of track shorted. As an option, if a car is returned to the portion of the track where the shorting took place, then the penalty is not applicable.

C72: Driving at any time in reverse of the track traffic. It will be a one (1) lap penalty

assessed from the race score.

C73: A racer must not hit the throttle while their car is in the hands of a turn marshall. This is a ten (10) second penalty.

C74: Deliberate, abusive nerfing, or bumping will be reason for ten (10) second penalty or disqualification.

C75: Improper reentry of a car to the racing surface will cause a ten (10) second penalty.

C76: Driving a car when the body has been separated from the car will result in a penalty of no lap score associated with the infraction period.

C77: Failure of a racer to turn marshall at the designated time will result in a one (1) lap penalty from their main race score.

C78: A turn marshall making repairs to a race car will be penalized ten (10) seconds to their previous race score.

C79: Infractions must be witnessed by a Race Official and brought to the racer or entrant's attention before a penalty or sanction is assessed. Track infractions will be announced during the race. However, it is the racer or entrant's responsibility to observe track rules even if the infraction is not announced at the exact time it took place.

C80: Racers are subject to penalty or disqualification for an infraction by anyone associated with their entry.

C81: Interpretation of all rules and/or regulations along with violations and penalties thereof are at the discretion of ROAR.

C82: Rules without reference or references made to a "racer(s)" indicate a penalty from a race or a class. References made to an "entrant" indicate a penalty from all classes.

C83: A racer or an entrant penalized or disqualified has the right to protest the decision of the Race Director to the assigned ROAR authority at the event. The decision of the highest ranking ROAR authority will be final.

PROTESTS

C84: The Race Director, with or without protest, has the right to penalize or disqualify any vehicle, racer, or entrant for violation of any of these rules and/or regulations.

C85: In the case of qualifying, protests will be made only by another racer in the same class. In the case of a main race, protests must be made by another racer in the same main. Such written protest must be accompanied by a $20.00 cash fee per item protested plus replacement cost for each item protested and delivered to the Race Director within fifteen (15) minutes of the posting of the protested qualifying round or main race score. Protests considered by the Race Director to be unsportsmanlike will not be accepted. The decision of the highest ranking ROAR authority will be final. Protest fees will be returned to the protestor if the protest is allowed. Interpretation of all rules and regulations along with violations and penalties thereof are at the

discretion of ROAR.

C86: Inspection of protested items will be required of any racer who has an official protest lodged against their race vehicle. Failure to submit to inspection will result in automatic disqualification.

C87: The racer(s) lodging protest(s) must deliver the written protest and $20.00 per item protested plus replacement cost for each item protested to the Race Director or his designated representative prior to the initiation of the inspection of the protested vehicle(s). Those attending the inspection(s) will be as follows: (a) the protestor or designated representative; (b) the protested competitor's mechanic or designated representative; (c) the protested competitor or designated representative; (d) the Race Director or designated representative; (e)the Technical Director or designated representative; and (f) the ROAR Official(s) who will accomplish the required inspection. Owner or sponsor may dismantle the car under the supervision of the Race Official(s). No other persons will be present nor witness the proceedings until the inspection has been completed. Protests will only be accepted from bona-fide racers in the class. If the protested racer is found to comply with those sections of the rules for which they were protested, then the protest fee will be theirs. If the protested racer is found not to comply with that section(s) of the rules for which he was protested, the protest fee will be returned to the protesting racer and the protested racer disqualified.

C88: A racer or an entrant penalized or disqualified has the right to protest the decision of the Race Director to the assigned ROAR authority at the event. The decision of the assigned ROAR authority is final.

BUMPERS

C89: Bumpers are not required in all classes but when used they must be shock absorbing and non metallic. Front bumpers may extend 1/4" beyond the side of the body but must not exceed the dimensional requirements. Bumper may not extend forward of the body.

NUMBERS

C90: For scoring purposes, cars will have three (3) race unique identifying numbers on three (3) positions so that the car's number can be seen from the right side, the left side, and the front of the vehicle. Numbers must be black numerals on a white background. Size requirements are listed in each class rules. Drag cars require only one (1) number. The Technical Director has the right to require a change in a race vehicle's identifying number.

TIRES

C91: Tires will be black except for sidewall lettering. No metal, rigid plastic, or synthetic spikes or sections may be added to the tires. No more than 1/16" of wheel rim may be exposed (not covered by tire) on the outside of the wheels.

C92: Scale tire measurements apply before a race. Normal wear during a race may cause post-race measurements less than minimum.

C93: For carpet races, tire cleaners and/or traction compounds applied to the tires

that can coat the track are not allowed. It is recommended that indoor tracks take excessive odor into consideration when allowing certain traction compounds. Use of tire cleaners and/or traction compounds are at the Race Director's discretion. Notification of known tire additives not allowed should appear on entry forms or be announced at the driver's meeting.

AWARDS

C94: No cash prizes or contingency money is allowed at a ROAR sanctioned event. Participation in such an event will result in revoking of individual ROAR membership, voiding of sanction, and barring of host club from holding a ROAR event for a fixed period of time.

C95: Merchandise awards will be given as random drawing only and not as a race winner's prize. Merchandise certificates may be substituted, but can not exceed the cash value of an appropriately priced trophy.

WINGS

C96: Only single and two element wings are allowed. Example: Tri-level wings may not be used.

BODIES

C97: The essence of the sport of radio controlled car racing is competition between realistic scale models of race cars.

C98: Events may be held for only one body style if so desired. When originally entered in an event, the body must be neatly finished, painted and complete.

C99: All cars must have a readily removable body. Rubber bands to hold the body on are not allowed. Body and chassis must be securely joined at all times while the car is on the track. No car is allowed to cross the start/finish line without the body being properly fastened. If a body becomes separated from the car, the car must pull off the track and have the body re-fastened by a non-turn marshall before resuming the race. Penalty is no score associated with the infraction period.

C100: Spoiler and side dam dimension includes that which is molded into the body.

C101: All cars must have either a transparent or a translucent windshield. Open or painted windshields are not allowed, except models of actual cars that did not have a transparent or translucent windshield. Side and/or rear windows may be transparent, translucent, or open.

C102: For closed wheel bodies, no portion of the chassis, wheel/tire, or equipment may extend beyond the body except to the rear. Openings in the body other than those appropriate to full-size car openings, grill, scoops, air vents, etc., will be kept to a minimum. Openings for necessary mechanical and electrical components, such as an antenna, will not be more than 3/8" clearance around such components. Specifically servos, receivers, batteries, and servo savers are not allowed to protrude through the original body shell. No sharp, protruding objects are allowed. Wheel cutouts are allowed on the side plane of the body. Specifically they may not extend into the horizontal plane of the body. Wheel cutouts in excess of the scale cutout

may be no more than dimension given in each scale rule. Wheel wells must be cut out if the original car ran that way.

C103: Body can not be trimmed higher than the lower body trim line. Rear section of body may be cut out as long as side plane of the body remains intact.

C104: All body components shall remain on the vehicle, except accidental damage, during the entire race.

C105: Proof of the legality of the body is the responsibility of the racer.

C106: Any other restriction to body specifications is governed by the ROAR Executive Committee and included on the current approval form.

GT BODIES

C107: GT class bodies will be models of production cars actually raced in SCCA Trans Am, IMSA GT, or IFA Group 5. This class is for coupes and sedans only, such as Camaro, Capri, Corvette, Datsun 300Z, Lancia Stratos, Liger Maserati, Mustang, Porsche Carrera, VW, etc.

CanAm BODIES

C108: CanAm class bodies will be models of closed wheel, open cockpit cars actually raced in CanAm or FIA Group 6 or 7.

GTP BODIES

C109: GTP class bodies will be models of closed wheel, closed cockpit cars actually raced in IMSA GTP, IMSA Camel Lights, or FIA Group C.

INDY BODIES

C110: Indy class bodies will be models of open wheel, open cockpit cars actually raced in CART or USAC Indy, Formula Atlantic, or FIA Formula 1, 2, or 3.

C111: Front spoilers or canard fins must be flexible, non-metallic material and must be attached only to the body.

WINSTON CUP BODIES

C112: Winston Cup class bodies will be models of production cars actually raced in NASCAR Winston Cup or Busch Grand Nationals. American Sedans only.

C113: If wings are allowed by the class rules, only clear wings may be used.

C114: Only one rear spoiler or one rear wing is allowed. Side dams on body not permitted.

See General Regulations, Electric Rules, Fuel Rules, Scale Specifications, and Scale Drawings for additional rules and/or regulations.

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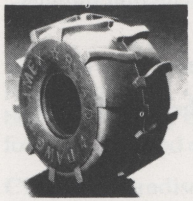
TOP DAWG TIRES

We Give You the Real Thing in 1/10-Scale Quality Radio-Control Replacement Parts. See These and Our Complete Line of 50 R/C Scale Tires at Better Hobby Shops Everywhere.

TRUCK-PULL TIRE

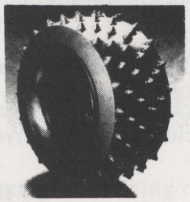


Item 7590
(Fits Lunch Box or Blackfoot)
Reg. size ..... $20.00 pr.
New club size ..... $28.00 pr.

MONSTER TRUCK TIRE

Item 7591 ..... $20.00 pr.
(Fits Blackfoot)

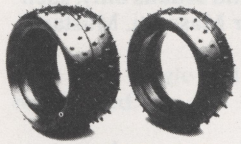
MONSTER SPIKE TIRE



Item 7629 ..... $18.00 pr.
(Fits Blackfoot)

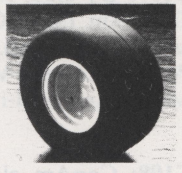
MONSTER PADDLE TIRE

Item 7589 ..... $15.00 pr.
(Fits Blackfoot)

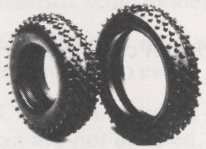


CAT PIN SPIKES
Front #7637 ..... $9.00 pr.
Rear #7636 ..... $10.00 pr.

OLYMPIC TREAD
Fits Bru-Line rim system with adapters for RC10, Kyosho and Tamiya.
Front #7592 ..... $12.00 pr.
Rear #7593 ..... $12.00 pr.
Wide Rear #7594 ..... $15.00 pr.

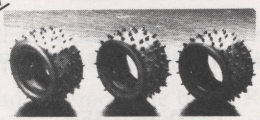


SLICK TIRE
Fits Blackfoot or 2.2-inch rim.
Item 7628 ..... $15.00 pr.



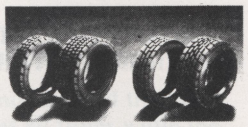
FRONT SPIKES
1 1/2-inch Rim #7631 ..... $7.00 pr.
2-inch Rim #7630 ..... $7.00 pr.

NEW



LOW PROFILE MONSTER SPIKES
3 Styles:
Mini Spike #7580 ..... $13.00
Cat Spike #7581 ..... $13.00
Q-T Spike #7582 ..... $13.00

(Available in soft, medium and hard compounds.)

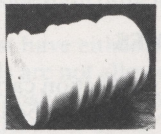


STREET TIRES
2.1-inch fronts and 2-inch-diameter rears. Real rubber. $12.00 a pair.

NEW

1/10-SCALE R/C LARGEST TIRE JUMBO CRUSHER

$28.00 a pair



Fits IMEX Jumbo/Dual Rim for Blackfoot/Monster Beetle
Front Silver ..... $14.98 pr.
Rear Silver ..... $14.98 pr.

$14.98 a pair

NEW

CHROME CLOD BUSTER RIM

$15.98 a pair

NEW

BLACKFOOT RIMS
Chrome Front ..... $8.98 pr.
Chrome Rear ..... $8.98 pr.
Hot Pink Front ..... $7.98 pr.
Hot Pink Rear ..... $7.98 pr.
Hot Lime Front ..... $7.98 pr.
Hot Lime Rear ..... $7.98 pr.
Hot Blue Front ..... $7.98 pr.
Hot Blue Rear ..... $7.98 pr.
Hot Orange Front ..... $7.98 pr.
Hot Orange Rear ..... $7.98 pr.
Hot Yellow Front ..... $7.98 pr.
Hot Yellow Rear ..... $7.98 pr.

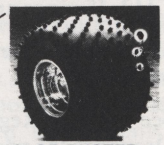
NEW

CLOD BUSTER DUAL TIRE AND RIM SET

The ultimate in big-wheel action.

$49.98 a pair

NEW



CLOD BUSTER SPIKE TIRE
(Widest spike available.)

$28.00 a pair

"KEEPING YOUR HOBBY AFFORDABLE"

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IF ITEMS ARE UNAVAILABLE AT YOUR HOBBY SHOP, ADD $2.50 POSTAGE.

CATALOG $2.50

ELECTRIC RULES

E1: Barrier Requirements - Road Course: minimum accepted portable barriers is 1/2" x 4" plywood on edge with the ends linked together. Barriers such as fire hose or P.V.C. may be used (2 1/2" minimum diameter). Oval Course: minimum accepted portable barriers are 1/2" x 12" plywood on edge with the ends linked together.

E2: In electric classes there will be NO restarts. Jump starts in qualifiers will cause a ten (10) second penalty and in the mains a one (1) lap penalty. Optionally, if offender moves over by the first turn and allows all other cars to pass before continuing, then no penalty will be assessed.

E3: Numbers: 1" in height minimum. 1/4" minimum stroke.

E4: For On-Road courses, roll over antennas are allowed. However, they must terminate with a button or ball having a diameter of at least 5/16". They are not allowed on any oval course.

E5: For carpet tracks, a minimum of 1/16" clearance must be maintained between the car or the body and the racing surface.

BATTERIES

E6: Only sub-C size nicad batteries rated at 1.2 volts or less will be approved and used for electric car racing. For Drag Car battery specifications see E49.

E7: Basic dimension: 23mm diameter, 43mm length. Production clearances considered. For Drag Car battery specifications see E49.

E8: Batteries must be available through hobby distributor(s) and hobby dealer(s) nationwide for a maximum base retail price of $7.50 per cell.

E9: Batteries must have identifiable means (manufacturer's original label, manufacturer's established mark, etc) to be allowed. It is up to the racer to prove the legality of their batteries.

E10: Batteries may not be charged or changed during the race length as listed in the Scale Specifications. They may be changed during an Enduro race.

E11: ROAR Executive Committee has final approval over battery legality. Any other restriction is governed by the Executive Committee and included on the current approval form.

ELECTRIC MOTORS

E12: Only "05" size may be used. "05" size based on established industry standards. Overall maximum diameter is 36.02mm measured at whichever point affords the maximum dimension. Maximum length is 53mm measured from the mounting face of the motor to the furthest most point not including solder tabs or lead wire. Shaft diameter is .125 inches. Motor mounting holes must be on 1.00 inch centers. Ceramic magnets only. Cobalt and rare earth magnets are specifically not allowed. Maximum stack length 22.6mm. Maximum stack diameter 23.2mm. Limited to three (3) pole armatures only.

E13: ROAR approved motors must have original manufacturer's logo or name

molded into the end bell or permanently stamped on the can, effective January 31, 1988.

E14: Any motor submitted and approved for use in the Stock class must be easily identifiable by a permanent external means so as to distinguish the motor from all other motors not wound to the specifications or approved for Stock class in the manufacturer's line or on the market. Failure to comply can result in removal of the motor from the Stock motor approved category by the Executive Committee.

E15: Any motor must be approved by the ROAR Executive Committee. A minimum of 5000 units for Stock or 2000 units for Modified must have been produced and/or available in the USA or Canada at the time of approval. Any other restriction pertaining to distribution and availability are governed by the ROAR Executive Committee and included on the current approval form.

E16: Any new approved motor added between publication of rule books must be published in Rev-Up prior to being legal.

STOCK ELECTRIC MOTORS

E17: Must be bushing type motor only and conform to technical specification for Electric Motors in E12-E16.

E18: No modifications allowed that require disassembly and/or internal work to the motor - including: no re-balancing, no re-tuning, no re-forming of the can, no re-epoxying, no adding ball bearings, no modification to the brush hood system, no removing of the end bell, and no adding or removal of material or parts except that of replacing or modifying of the motor brushes or springs on external brush system motors.

E19: Stock motors will be wound using a "Mabuchi" cross wrap technique and a knurled shaft process that locks the commutator and the armature's stack so that timing can not be changed without disassembling the motor. Legal stock wind to be a minimum of 27 continuous turns of 22 AWG wire having a maximum wire diameter of .67mm. Production allowance of one (1) turn on one (1) pole only is allowed. No plus tolerance allowed to wire diameter. Wire size verified by a certified independent testing lab.

E20: Stock motors must have an identifying mark molded in the end bell or permanently stamped on the can separating this motor from non-Stock approved motors.

E21: A Stock motor that shows any sign of tampering will be disqualified. At events were Stock Motors are provided, the racer is still responsible for any signs of tampering.

E22: At Level 3 and 4 events, the motors used in the first, second, and third place cars in the A mains in Stock Class(es) may be torn down at the discretion of the Race Director. At Level 5 events, all A main motors will be inspected for legality immediately after the race. For any motor found to be illegal, the racer will be disqualified by the Race Director and the motor will not be replaced. Legal motors will be replaced by the promoter.

E23: If it is not specifically allowed it is not legal.

E24: Stock motors must be commercially available through hobby distributor(s) and hobby dealer(s) nationwide for a maximum retail price of $28.00. Price based on a Japanese yen USA dollar ratio of 140Y/$1.00. Price can be adjusted up or down upon substantial changes to this rate by review from the Executive Committee.

E25: Proof of the above plus a completed application from the importer or manufacturer must be furnished to the Executive Committee prior to the approval of any Stock motor.

MODIFIED ELECTRIC MOTORS

E26: Must conform to technical specification for Electric Motors in E12-E16.

E27: Base motor may be modified by re-winding, epoxying, balancing, cooling holes, ball bearings, and custom brush systems. However the stock can, armature, commutator, magnets, and end bell must be used, but may be modified. No hybrids, mixing of parts from different base motors, are allowed. Many base motors share some common parts, but are not classified as hybrids when a minimum of 2000 units are available and approved.

E28: At Level 3 and 4 events, the motors used in the first, second, and third place cars in the A mains in Modified Class(es) may be inspected at the discretion of the Race Director. At Level 5 events, all A main motors will be inspected for legality immediately after the race. Any racer found to have an illegal motor will be disqualified by the Race Director.

E29: Modified motors must be commercially available through hobby distributor(s) and hobby dealer(s) nationwide for a maximum retail price of $80.00. Price based on a Japanese yen USA dollar ratio of 140Y/$1.00. Price can be adjusted up or down upon substantial changes to this rate by review from the Executive Committee.

E30: Proof of the above plus a completed application from the importer or manufacturer must be furnished to the Executive Committee prior to the approval of any Modified motor.

ELECTRIC MOTOR PROTEST PROCEDURES

E31: Any motor that is protested may only be torn down for an internal inspection at the end of the event. The motor will be marked at the time of protest in such a manner that it can be identified at the end of the event.

E32: Questioning of non-obvious stock motor wire size can only be determined after verification from an independent testing lab.

E33: A motor may be inspected externally at any time. An internal inspection is not always required to find a violation.

E34: Any racer found to have a motor that does not comply with the rules and/or regulations will be disqualified from the event.

STOCK CLASS

E35: Drive motor will be legal ROAR Stock motor.

MODIFIED CLASS

E36: Drive motor will be legal ROAR Stock, whether modified to Modified rules or not, or Modified motor.

FOUR-WHEEL DRIVE CLASS

E37: Drive will be by four-wheel drive or two-wheel front drive vehicle.

TWO-WHEEL DRIVE CLASS

E38: Drive will be by two-wheel rear drive vehicle only.

PRODUCTION CLASSES

E39: Production class rules are based on the premise that the beginner/novice driver needs a place to begin. Rules should be designed to limit the money invested to be competitive. They should also take into consideration the limited amount of experience of the driver, and at the same time, allow certain modifications that will make the car more reliable.

E40: The car must be commercially available through hobby distributor(s) and hobby dealer(s) nationwide.

E41: Six (6) cells batteries and Stock motors only.

E42: Cars with transmission(s) must retain stock transmission ratio although spur gears and pinions may be changed.

E43: Cars must conform to scale specifications.

E44: Exact rules and or specifications are left to the discretion of the Level 1 sanctioned promoter. However, they should be in writing and should be approved by the Region Director so that the intent of the rules and their application are clearly spelled out.

DRAG CARS

E45: Drag cars are separated into the following classes: Pro Stock, Funny Car, and Dragster.

E46: Pro Stock cars include those cars as outlined under GT bodies and Winston Cup bodies. No wings allowed. A 2" maximum spoiler may be added. Modified motor specifications are outlined under Electric Motors.

E47: Funny cars must resemble American production car bodies of 1980 or newer. Body must retain sufficient shape and features to be recognized as a particular full-sized car, but may be altered to comply with current state of the art practices in Funny Cars. Maximum spoiler height is 3" including molded in spoiler dimension. Maximum side dam dimension is 4" long and 1" high. No wings allowed.

E48: Dragsters must be recognized as a dragster type car. Any realistic dragster body is allowed. Maximum wing height above the ground is 7".

E49: Batteries will be full size sub-C, 3/4 sub-C, or 1/2 sub-C nicad cells rated at 1.2 volts or less. Section E9 also applies.

E50: Jump start loses the round. Crossing the center line loses the round. In the event one lane red lights and the other crosses the center line, the red light wins.

See General Regulations, Competition Regulations, Fuel Rules, Scale Specifications, and Scale Drawings for additional rules and/or regulations.

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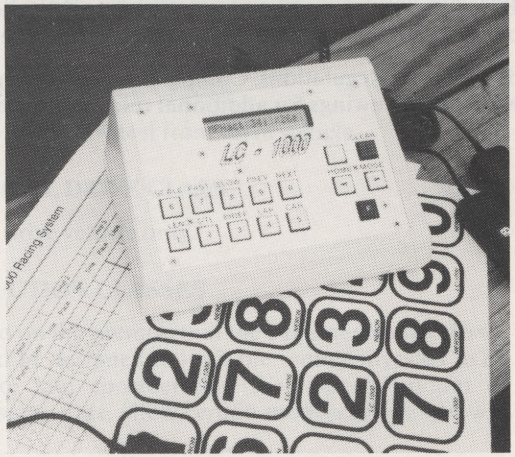

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FUEL RULES:

1/8 Scale Gas On-Road

F1: Fuel powered vehicles must have brakes in working condition capable of stopping and holding it motionless with the engine running. Cars must also have an operational de-clutching device.

F2: Fuel tanks must be securely mounted.

F3: In case of servo failure, vehicles must incorporate a positive action return spring attached directly to the carburetor throttle arm.

F4: Barrier Requirements - minimum accepted portable barriers are 3/4" x 8" plywood on edge with the ends linked together.

F5: Supplemental barriers - 1 3/4" x 3 1/2" (common 2 x 4) board on edge, preferably anchored to the racing surface.

F6: The infield boundary should be clearly marked by a stripe at least 3" wide. The outer boundary should also be marked by a similar stripe. Corner cutting limiting devices will be placed approximately ten (10) inches inside the inner boundary.

F7: A re-fueling or pit area will be provided outside the main racing surface with a separate exit from and a separate entrance to the racing surface. This area will be used only for the re-fueling of cars during longer races. It will be of sufficient size to allow easy and safe passage of other cars into and out of the re-fueling area. A pit wall will be constructed as a safety barrier for the pit people. Any repairs to the car will be accomplished in the working Pits. During qualifying, no more than one (1) pit member for each car be allowed in the re-fueling area. During the mains two (2) are allowed.

F8: Misuse of the pit area or improper re-entry of a car to the racing surface will cause either a ten (10) second stop and go penalty or a one (1) lap penalty off of the main race score imposed by the Pit Steward.

F9: ROAR National Championship(s) will be decided at one event. It may include other types of racing, but a Nationals is required for road course only.

F10: At level 3, 4, and 5 events only one class may be entered. This rule does not apply to level 1 or 2 sanctions, but it is recommended for those events as an incentive to speed up racing, equalize track time for participants, and allow less experienced or limited budget drivers an equal competitive situation.

F11: Engine, fuel tank capacity, carburetor restrictors, and other scale specifications may be checked at any time by the Technical Director. At the Nationals, fuel tank capacity and engines of the top three A main finishers will be inspected.

STARTING

F12: The cars in any given race will be called to the track three (3) minutes prior to the start of the race. They will be given 2 1/2 minutes for warm up and practice. Thirty (30) seconds before the start, they will be called to the starting line for re-fueling, final preparation, and line up. Five (5) seconds before the start, the starter

will signal the pit men with five (5) fingers raised as notification that the race is about to start. He will then count downward, showing four fingers, then three fingers. At the three second mark, the flag will be touched to the ground and all pit men will place their cars on the ground and release them. Hands Off. At some point within the next three seconds and after all cars are released, the Starter will lift the flag and the race will begin. Cars not released and ready for the start of the race will be assessed a 10 second penalty and will not delay the start of the race - no exceptions! As an alternate to using a Starter, the race may be called over the PA system provided all participants can easily hear the system.

F13: Line up for heat races will be in a straight line to give all racers an equal chance. Line up for the mains may be a LeMans start; that is cars are lined up diagonally by qualifying time, fastest qualifier at the front. For LeMans starts, all pit crew members must be clear of the racing surface to prevent injury and all racers must have clear visibility of the cars.

F14: The Track Steward, Starter, and/or Race Director will make every effort not to delay the start of a race. Cars will not be allowed on the track before the three minute warm up period. After the three minute period is announced, the start will be as close to three minutes as possible. It is unfair to the competitors to allow long warm-up periods where their cars may be damaged or exhibit undue wear of any part. In the same manner, it is unfair to hold the start of a race for unprepared cars.

FUEL TANK INSPECTION

F15: To check a tank capacity, first completely drain all fuel from the tank, then any line attached to the tank should be pinched off to prevent fuel from escaping into the system. Using a graduated cylinder, measure 125cc of the racer's fuel and pour in into the tank. The fuel should completely fill the tank to the top of the filler neck or to a point where fuel is forced out when the lid is closed. When reading the graduated cylinder, note that the reading will be taken at the bottom of the meniscus. The bottom of the center of the fuel line as viewed from the side of the cylinder at eye level.

BUMPER

F16: All cars must have a front bumper of no less than 1/8" material. Must be mounted parallel to the chassis. At the rear, a wire bumper may be used provided it is made of wire no less than 3/32" in diameter with all exposed edges smooth and well rounded. No part of the bumper may extend beyond the tires.

MUFFLER

F17: All cars are required to run a muffler which will cut the sound level to 80db (decibels) measured at a ninety degree angle to the side of the car from a distance of thirty (30) feet with the car at maximum throttle and at all speeds. The Radio Shack sound meter #33-1028 or equivalent will be used to check the sound level.

F18: Mufflers or exhaust systems must be mounted in such a manner that the discharge is parallel to the ground or lower. This is to prevent the dangerous discharge of fuels upward, perhaps causing injury to someone's eye or face.

F19: Any car that loses its muffler will be black flagged immediately and not scored

until repairs are made. Infraction must be repaired before the car is returned to the race.

WING

F20: The wing may be no closer than 1/4" to any part of the body other than the tail fins or side dams.

BODY

F21: A driver's figure consisting of a least a driver's head, shoulders, and arms will be mounted in all open cockpit cars. The figure will be realistic in appearance, color, and garb.

F22: An opening no larger than 3 1/2" x 3 1/2" or 12.25 square inches for engine access is allowed. Openings for necessary mechanical and electrical components; switches, antenna, glow plug, roll bar, etc.; will not provide more than 1/2" clearance around such component. A 1/4" hole is allowed in the windshield for access.

FOUR-WHEEL DRIVE CLASS

F23: Drive will be by four-wheel drive or two-wheel front drive vehicle.

TWO-WHEEL DRIVE CLASS

F24: Drive will be by two-wheel rear drive vehicle only.

SPORTSMAN CLASS

F25: An entry level class for two-wheel rear drive suspension cars only.

PAN CLASS

F26: An entry level class for non-suspension cars. Non-suspension shall include: (a) straight rear axle and (b) king pin pivoting straight front axle.

SPORTSMAN AND PAN CLASS CARBURETORS

F27: Carburetors will be fitted with a restrictor in its throat. Maximum internal opening of restrictor is 4mm (.157"). Carburetor will be fitted and designed in a manner that does not allow any air to flow into the motor except through the restrictor. No additional sources of intake airflow allowed.

F28: A test for the correct flow of air is to cover the intake opening. The motor should stop immediately.

F29: A test for the correct restrictor size is to attempt to insert a go-no-go gauge, such as a .158" micrometer measured rod, into the restrictor. A legal restrictor would not allow the noted rod to pass through the restrictor's orifice.

See General Regulations, Competition Regulations, Electric Rules, Scale Specifications, and Scale Drawings for additional rules and/or regulations.

SCALE SPECIFICATIONS
1/12 Scale Electric On-Road Rules

Track widths -
six (6) cell - continuous eight (8) feet minimum
four (4) cell - continuous six (6) feet minimum

Wheel Sizes -
30mm (1.18") minimum diameter
38mm (1.49") maximum diameter

Wheel cut out -
3/8" maximum over tire diameter

Tire size -
width: 1/2" minimum. 1 1/2" maximum
No minimum tire diameter

Wheel base -
8 3/4" maximum - 7 1/4" minimum

Width -
6 3/4" maximum

Overall length -
18 1/2" maximum

Batteries -
6 cell or 4 cell

Weight -
6 cell - 31 ounces minimum
4 cell - 28 ounces minimum

Race Lengths -
Road Course: eight (8) minutes
Oval Course: five (5) minutes

Rear suspension -
straight axle design only. Independent rear suspension is not allowed.

1/10 Scale Electric On-Road Rules

Track widths -
continuous ten (10) feet minimum

Wheel Sizes -
1.624" minimum diameter
2.00" maximum diameter

Wheel cut out -
1/2" maximum over tire diameter

Tire size -
width: 3/4" minimum 2" maximum
No minimum tire diameter

Wheel base -
11" maximum. 9" minimum

Width -
9 7/8" maximum

Overall length -
22" maximum

Batteries -
6 cell only

Weight -
42 ounces minimum

Race Lengths -
four (4) minutes

Rear suspension -
straight axle design only. Independent rear suspension is not allowed.

1/10 Drag Cars

Track widths:
continuous ten (10) feet minimum per lane

Track Length:
132 feet
A minimum of one hundred feet stopping distance should be provided beyond the end of the marked course. Catch nets are recommended. No individuals are allowed in this shut down area.

Multiple speed transmissions -
Allowed in all classes

Wheel Sizes -
1.624" minimum diameter
2.000" maximum diameter

Wheel cut out -
1/2" maximum over tire diameter

Tire size -
Pro Stock - width: 1/8" minimum 2" maximum
No minimum tire diameter
Funny Car - width: 1/8" minimum 2 1/2" maximum
No minimum tire diameter
Dragster - width: 1/8" minimum 2 1/2" maximum
No minimum tire or front wheel diameter

Wheel base -
Pro Stock - 11" maximum. 9" minimum
Funny Car - 14" maximum. 12" minimum
Dragster - 24" maximum. 16" minimum

Width -
9 7/8" maximum

Overall length -
Pro Stock - 22" maximum
Funny Car - 28" maximum
Dragster - 30" maximum

Batteries -
Pro Stock - 8 cell maximum
Funny Car - 12 cell maximum
Dragster - 14 cell maximum

Weight -
Pro Stock - 42 ounces minimum
Funny Car - No minimum
Dragster - No minimum

Height -
Dragster - 7" maximum

1/10 Scale Electric Off-Road Rules

Track widths:
continuous eight (8) feet minimum

Wheel Sizes -
1.625" minimum bead mounting diameter
2.150" maximum bead mounting diameter
Bead mounting dimensions are measured at the point where the internal tire bead meets the wheel

2.390" maximum wheel diameter
Internal locking ring may be used for the purpose of retaining the tire only. Ring can not be used to increase the wheel's original size and/or the stiffness of the tire sidewall.

1.500" maximum width

Tire size -
1.75" maximum width
No minimum tire diameter
3.544" (90mm) maximum tire diameter

Wheel base -
11 1/2" maximum. 9" minimum

Width -
9 7/8" maximum

Overall length -
18" maximum

Batteries -
Stock: 6 cell
Modified: 7 cell

Weight -
2 wheel drive: 3 1/4 pounds minimum
4 wheel drive: 3 1/2 pounds minimum

Race Lengths -
Four (4) minutes

BODIES

All bodies must resemble actual bodies used in real Off-Road races. Single seaters, pick-ups, two seaters, etc. can all race together.

1/10 Scale Electric Dirt Oval Rules

Track widths -
continuous ten (10) feet minimum

Wheel Sizes -
1.625" minimum bead mounting diameter
2.150" maximum bead mounting diameter
Bead mounting dimensions are measured at the point where the internal tire bead meets the wheel.

2.390" maximum wheel diameter
Internal locking ring may be used for the purpose of retaining the tire only. Ring can not be used to increase the wheel's original size and/or the stiffness of the tire sidewall.

2.000" maximum width

Tire size -
2.00" maximum width
No minimum tire diameter.
3.544" (90mm) maximum tire diameter

Wheel base -
11 1/2" maximum. 9" minimum

Width -
9 7/8" maximum

Overall length -
22" maximum

Batteries -
Stock: 6 cell
Modified: 7 cell

Weight -
2 wheel drive: 3 1/4 pounds minimum
4 wheel drive: 3 1/2 pounds minimum
Sprint: 3 3/4 pounds minimum

Race Lengths -
four (4) minutes

SPRINT BODIES

Must be modeled after actual open wheel single seater sprint cars racing on dirt oval tracks around the USA. Windshield may be cut out. Rear tail section must be mounted on the car. No tail lights are required. An optional front wing, of maximum dimension 3" x 4" with a maximum side dam of 1" x 3 1/2" must be mounted between and below the front tires. A rear wing, maximum dimension 6" x 6" with a maximum side dam if 4" x 6 1/2" must be mounted over the driver's compartment. Headers and nerf bars must appear on the car, but can be polycarbonate molds.

OUTLAW WEDGE BODIES

Outlaw wedge bodies must be molded after actual closed wheel wedge-type cars racing on dirt oval tracks around the USA. Windshields may be cut out or left unpainted. Side dams are permissible in two configurations. Option number 1 (recommended for 4 wheel class): One side dam may be used with a maximum length of fourteen (14) inches and a maximum height above the side of the body set at 5 1/2". Maximum overall height set at 10" measured from ground level with the car at ride height. Top of side dam must be fastened to opposite side of body at two (2) points on the side dam. Maximum spoiler chord of one and one-half (1 1/2) inches. Option number 2 (recommended for 2 wheel class): Maximum of two (2) side dams, on opposite sides of the car, may be used. Maximum length of each side dam is eight (8) inches and a maximum height above the side of the body set at 3". Maximum overall height set at 7 1/2" measured from ground level with the car at ride height. Front top of each side dam must be securely fastened to the opposite side of the body. Maximum rear spoiler chord is three (3) inches.

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1/10 Scale Electric Monster Truck Rules

Track widths -
continuous eight (8) feet minimum

Wheel Sizes -
2.175" minimum bead mounting diameter
2.250" maximum bead mounting diameter
Bead mounting dimensions are measured at the point where the internal tire bead meets the wheel

2.425" maximum wheel diameter
Internal locking ring may be used for the purpose of retaining the tire only. Ring can not be used to increase the wheel's original size and/or the stiffness of the tire sidewall.

2.000" maximum width

Tire size -
2.6" maximum width
3.6" minimum tire diameter

Wheel base -
11 1/2" maximum. 9" minimum

Width -
13" maximum

Overall length -
18" maximum

Batteries -
Stock: 6 cell
Modified: 7 cell

Weight -
2 wheel drive: 3 3/4 pounds minimum
4 wheel drive: 4 pounds minimum

Race Lengths -
four (4) minutes

BODIES

All bodies must resemble race type truck bodies. Maximum rear spoiler chord of two (2) inches. No side dams or wings

1/8 Gas On Road

Track width -
ten (10) feet minimum
Engine size -
.214 cubic inches (3.5 cc)
Multiple speed transmissions:
2 and 4 wheel drive only. Not allowed in Sportsman or Pan classes
Fuel system capacity will not exceed 4.23 ounces (125 cc)
Wheel Sizes -
1.75" minimum diameter
2.125" maximum diameter
Wheel cut out -
1/2" maximum over tire diameter
Tire size -
width: 1" minimum 2 1/2" maximum
front tire diameter: 2 1/2" minimum
rear tire diameter: 2 3/4" minimum
Wheel base -
13" maximum. 11 1/4" minimum
Width -
10 1/2" maximum
Maximum overall length -
spec sheets
Minimum weight -
4 wheel drive: 5 1/2 pounds
2 wheel drive: 5 pounds
2 wheel pan: 5 pounds
Sportsman 2 wheel suspension: 5 1/2 pounds
Qualifier Race Lengths -
five (5) minutes
Race Lengths -
announced on flyer or at drivers meeting
See General Regulations, Competition Regulations, Electric Class Rules, Fuel Powered Rules, and Scale Drawings for additional rules and/or regulations.

1/8 Scale Gas Sprint Cars

Wheelbase -
11 to 12 inches, maximum tread width 10.5 inches outside
Minimum Weight:
5 pounds, dry
Maximum Carburetor Bore Size:
.300" diameter
No Rear Axle differential allowed
Body Size:
Must be within 10% of scale
Fuel Tank:
Must be within body shell and not exceed 4 oz. capacity
Only front engine, in-line, rear drive systems allowed
Maximum Top Wing Size:
36 square inches; and maximum side dam height is 4.5 inches
Maximum Allowable Exhaust Outlet:
3/8" diameter tubing
Front Bumper:
If used, cannot exceed chassis width (3").

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Introducing the Esprit Series motors. Based upon Yokomo's Esprit motor—which set THE world-wide standard for R/C car racing! Affordable power for everyone, the economical Esprit Series motors deliver reliable performance racers have come to expect from the name Reedy Modifieds.
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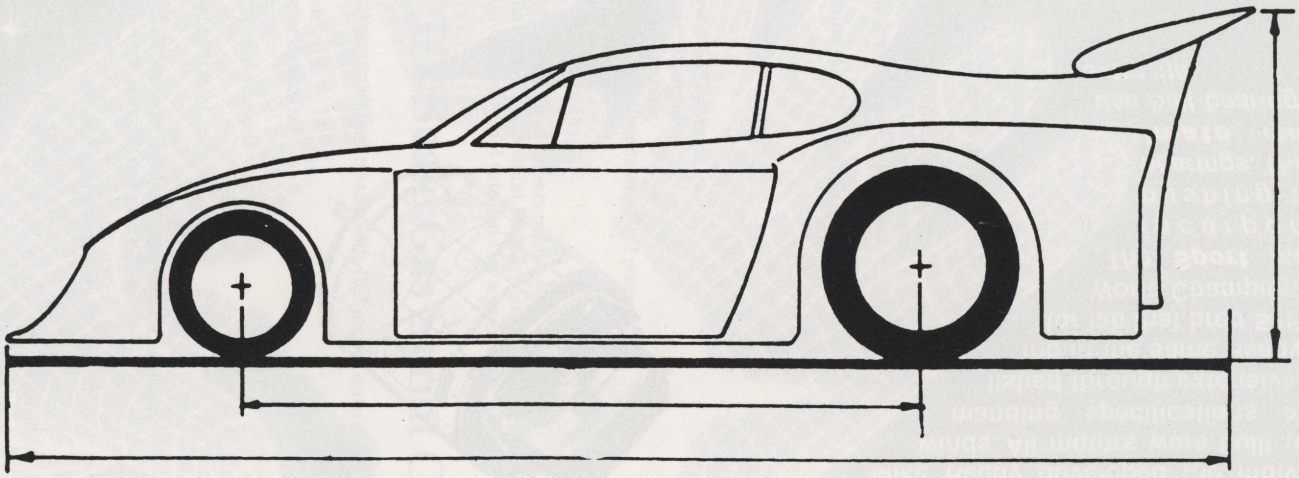
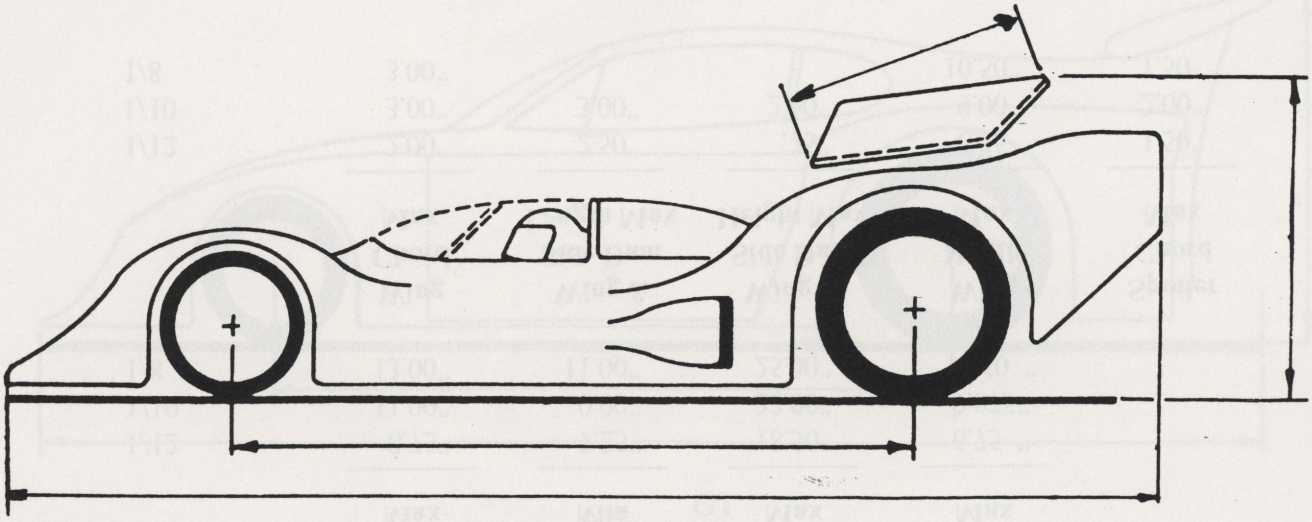


GT

ON-ROAD
GT

	A Max	A Min	B Max	Width Max
1/12	8.75"	7.25"	18.50"	6.75 "
1/10	11.00"	9.00"	22.00"	9.875"
1/8	13.00"	11.00"	25.00"	10.50 "

	Wing Chord Max	Wing & Side Dam Length Max	Wing & Side Dam Height Max	Wing Width Max	Spoiler Chord Max
1/12	2.00"	2.50"	.75"	6.75"	1.50"
1/10	3.00"	3.00"	2.00"	9.00"	2.00"
1/8	3.00"			10.50"	1.50"



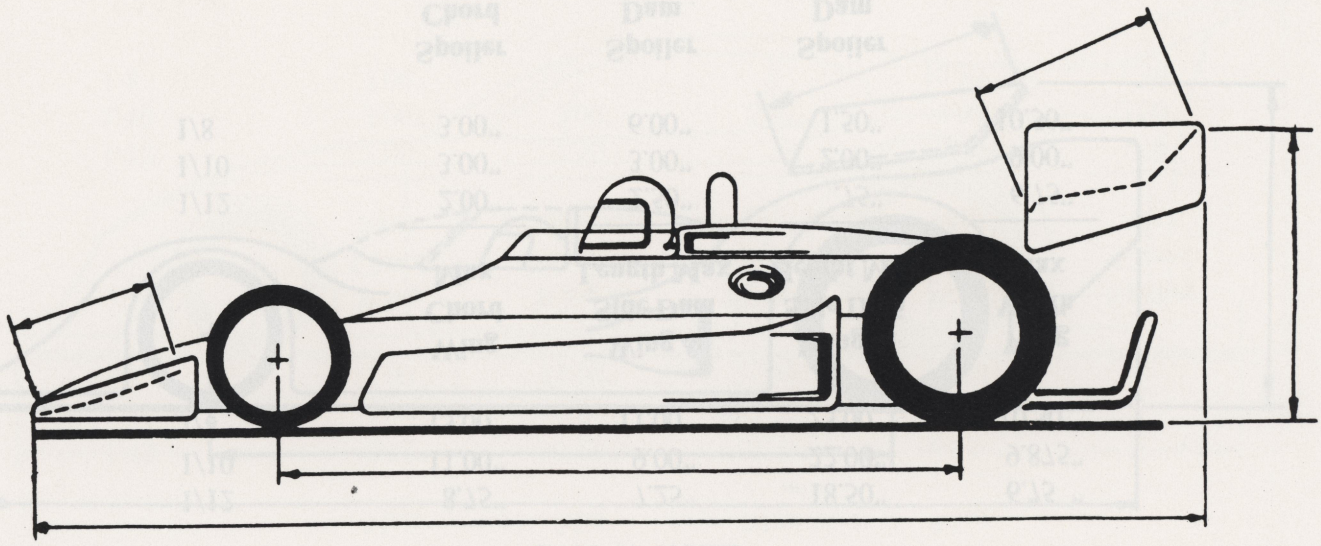
CAN AM/GTP

ON-ROAD
CanAm/GTP

	A Max	A Min	B Max	Width Max
1/12	8.75"	7.25"	18.50"	6.75 "
1/10	11.00"	9.00"	22.00"	9.875"
1/8	13.00"	11.00"	25.00"	10.50 "

	Wing Chord Max	Wing & Side Dam Length Max	Wing & Side Dam Height Max	Wing Width Max
1/12	2.00"	2.50"	.75"	6.75"
1/10	3.00"	3.00"	2.00"	9.00"
1/8	3.00"	6.00"	1.50"	10.50"

	Spoiler Chord Max	Spoiler Dam Length Max	Spoiler Dam Height Max
1/12	1.50"	4.00"	1.00"
1/10	2.00"	6.00"	1.50"
1/8	2.00"	6.00"	1.50"

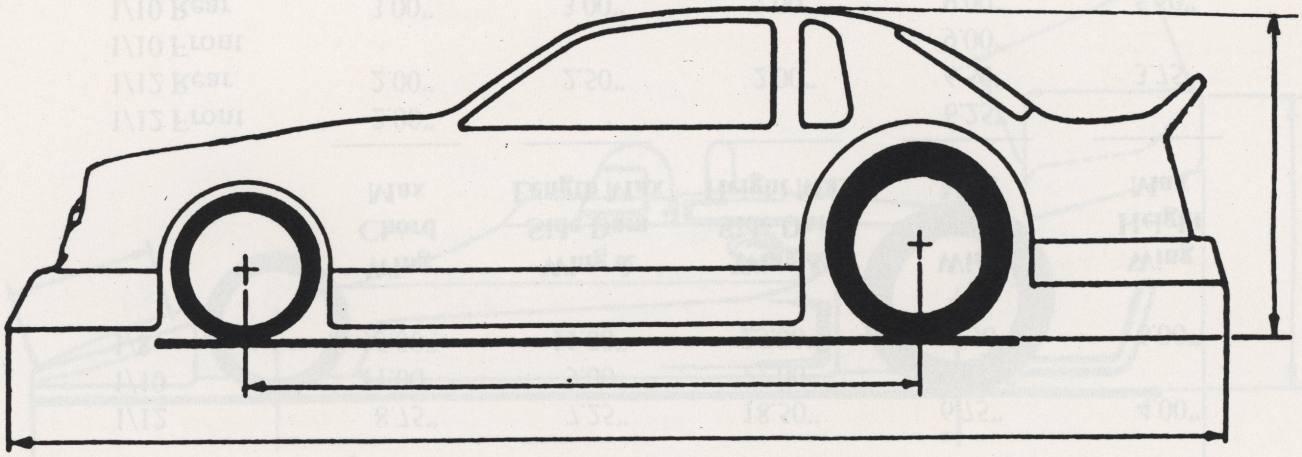


INDY

ON-ROAD
INDY

	A Max	A Min	B Max	Width Max	Height Max
1/12	8.75"	7.25"	18.50"	6.75"	4.00"
1/10	11.00"	9.00"	22.00"	9.875"	
1/8	15.00"	11.00"	25.00"	10.50 "	6.00"

	Wing Chord Max	Wing & Side Dam Length Max	Wing & Side Dam Height Max	Wing Width Max	Wing Height Max
1/12 Front	2.00"			6.25"	
1/12 Rear	2.00"	2.50"	2.00"	6.50"	3.75"
1/10 Front				9.00"	
1/10 Rear	3.00"	3.00"	2.00"	9.00"	5.50"
1/8 Front				8.50"	
1/8 Rear	3.00"	4.00"	3.00"	8.50"	5.50"

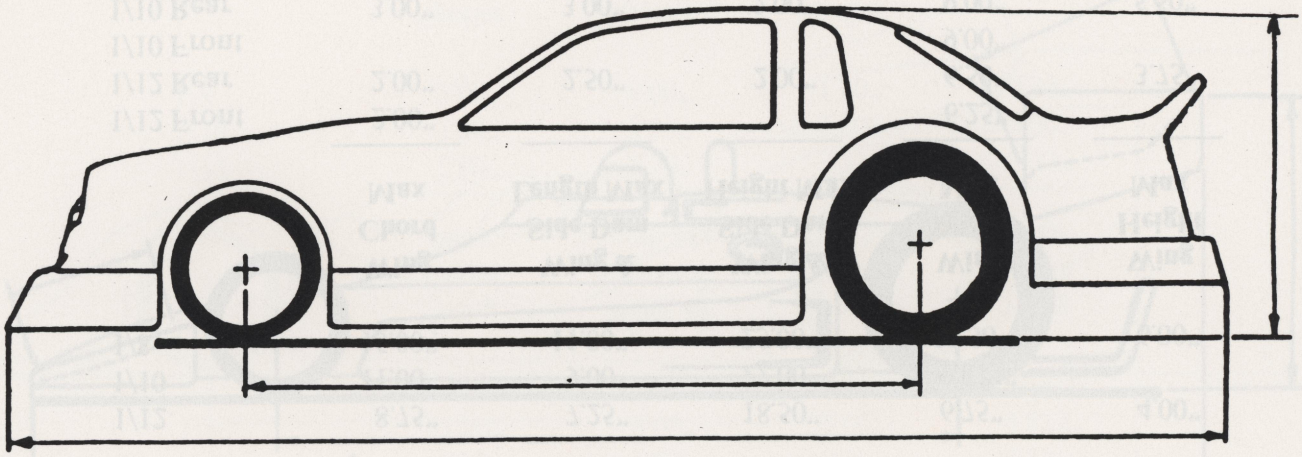


WINSTON CUP

ON-ROAD
WINSTON CUP

	A Max	A Min	B Max	Width Max
1/12	8.75"	7.25"	18.50"	6.75 "
1/10	11.00"	9.00"	22.00"	9.875"
1/8	15.00"	11.00"	25.00"	10.50 "

	Wing Chord Max	Wing & Side Dam Length Max	Wing & Side Dam Height Max	Wing Width Max	Spoiler Chord Max
1/12	2.00"	2.50"	.75"	6.75"	1.50"
1/10	3.00"	3.00"	2.00"	9.00"	2.00"
1/8	N/A			N/A	1.50"

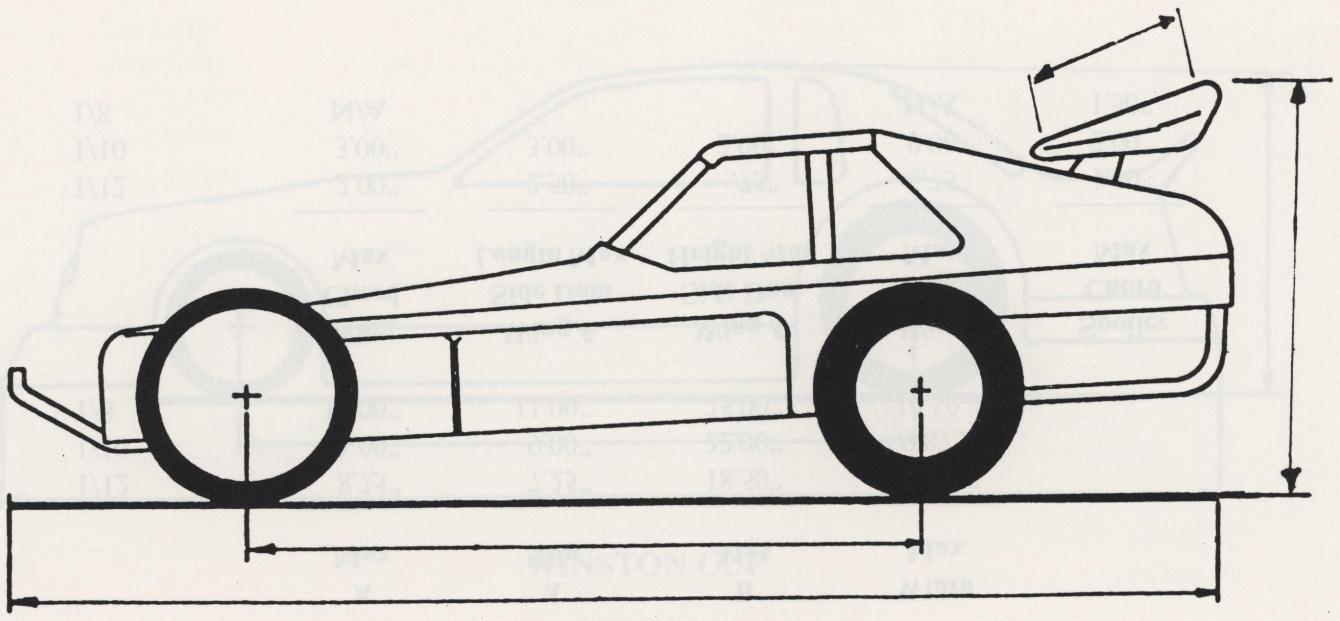


WINSTON CUP

ON-ROAD
WINSTON CUP

	A Max	A Min	B Max	Width Max
1/12	8.75"	7.25"	18.50"	6.75 "
1/10	11.00"	9.00"	22.00"	9.875"
1/8	15.00"	11.00"	25.00"	10.50 "

	Wing Chord Max	Wing & Side Dam Length Max	Wing & Side Dam Height Max	Wing Width Max	Spoiler Chord Max
1/12	2.00"	2.50"	.75"	6.75"	1.50"
1/10	3.00"	3.00"	2.00"	9.00"	2.00"
1/8	N/A			N/A	1.50"

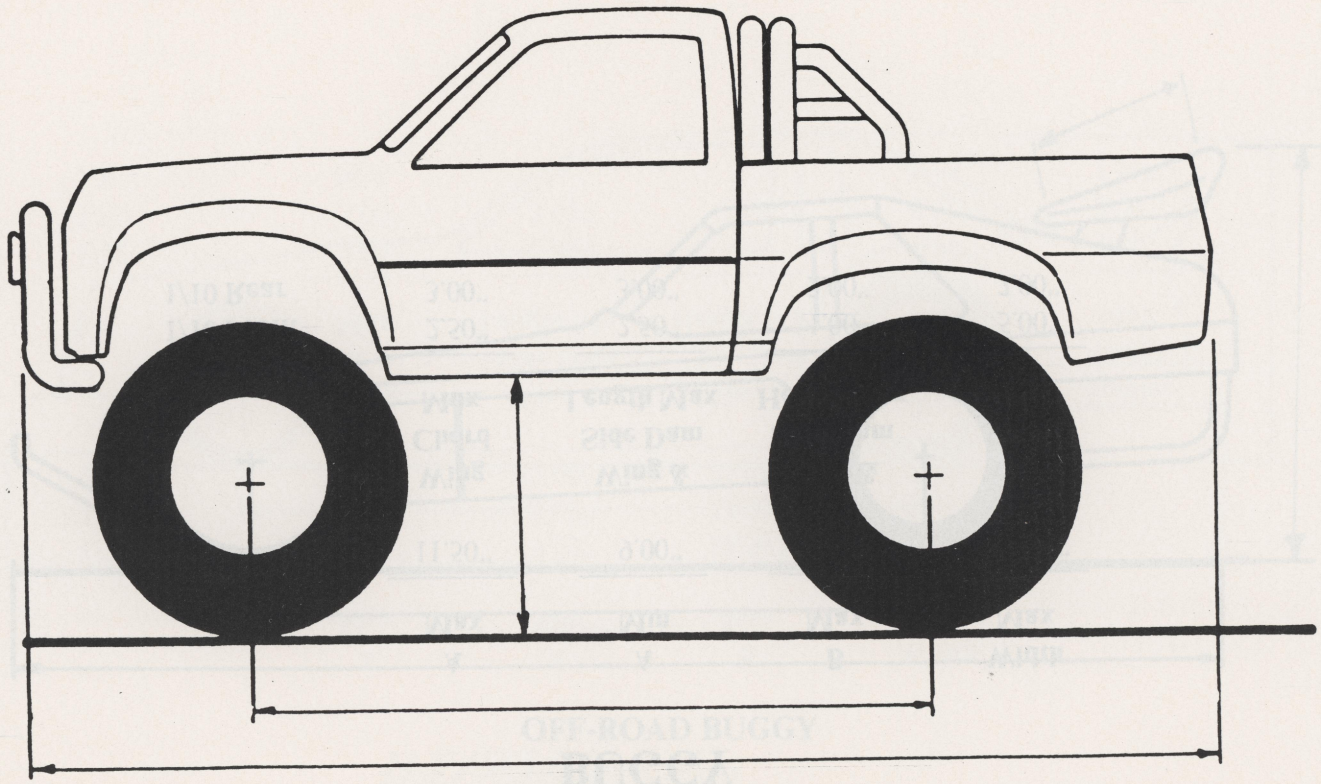


OFF-ROAD BUGGY

OFF-ROAD BUGGY

	A Max	A Min	B Max	Width Max
1/10	11.50"	9.00"	18.00"	9.875"

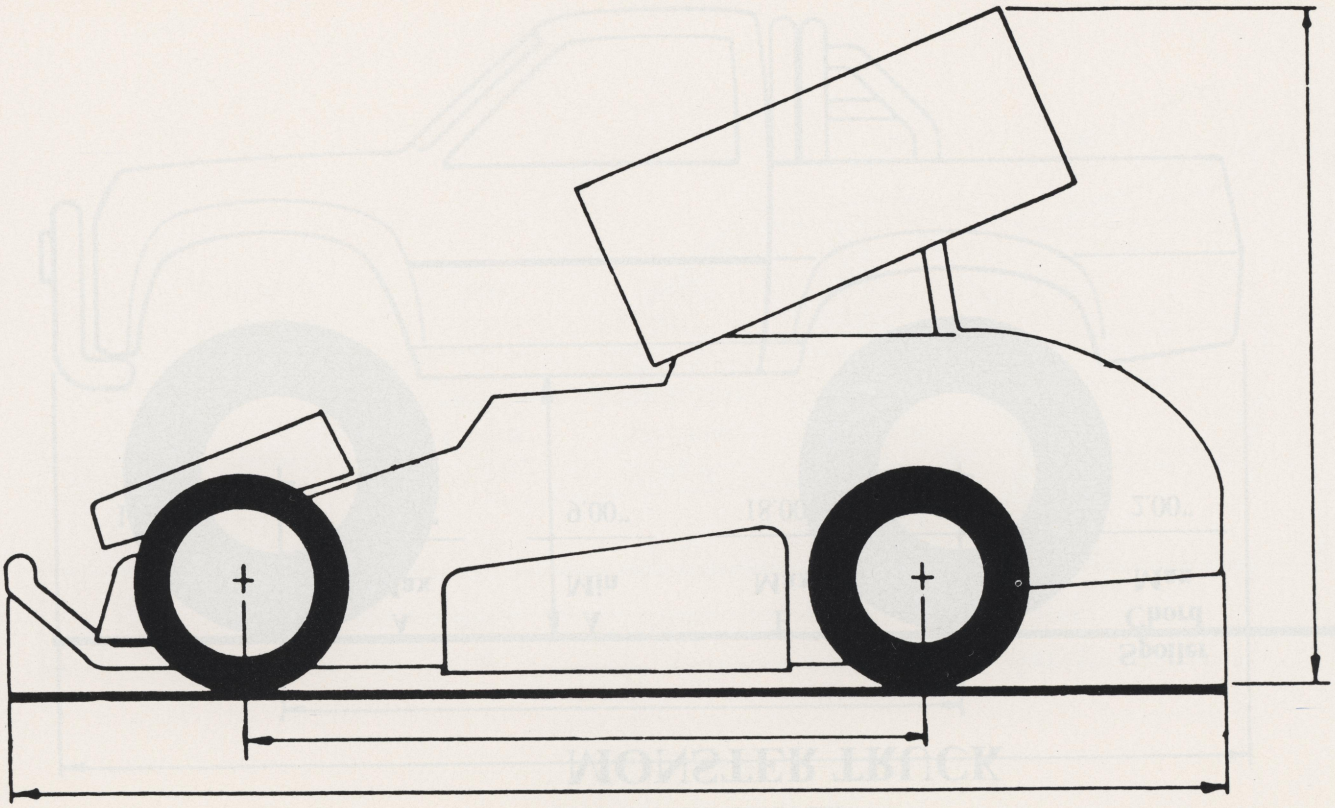
	Wing Chord Max	Wing & Side Dam Length Max	Wing & Side Dam Height Max	Wing Width Max
1/10 Front	2.50"	2.50"	1.00"	5.00"
1/10 Rear	3.00"	3.00"	2.00"	7.00"



MONSTER TRUCK

OFF-ROAD
MONSTER TRUCK

	A Max	A Min	B Max	Width Max	Spoiler Chord Max
1/10	11.50"	9.00"	18.00"	13.00"	2.00"

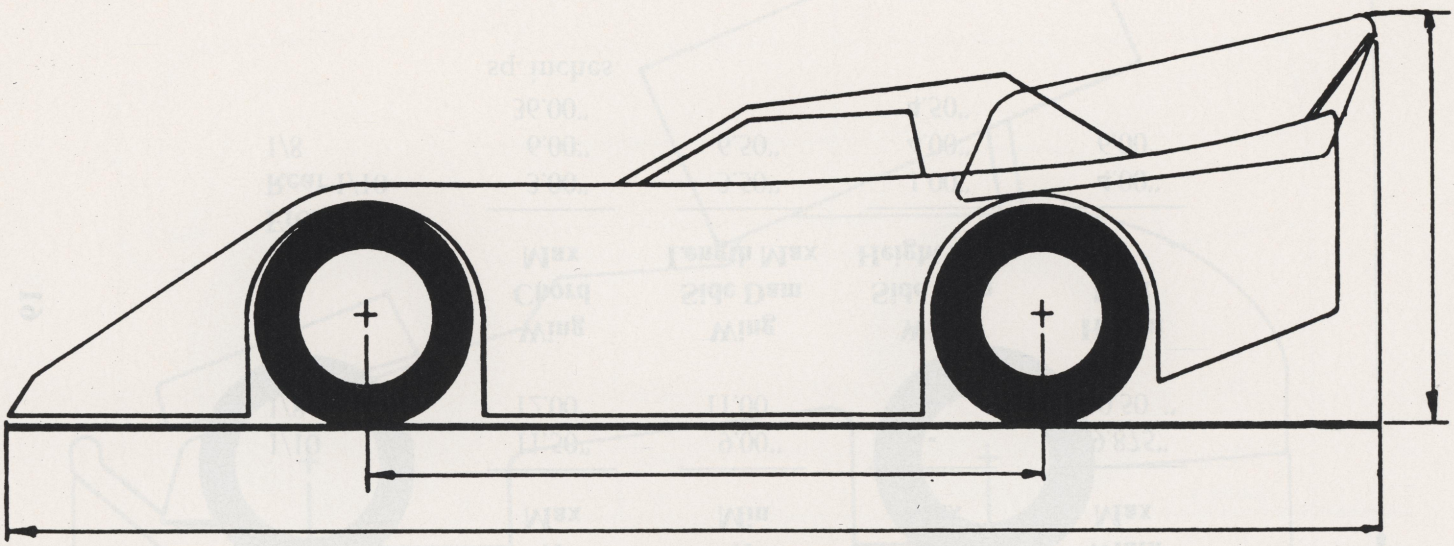


SPRINT

DIRT OVAL
SPRINT

	A Max	A Min	B Max	Width Max
1/10	11.50"	9.00"	-	9.875"
1/8	12.00"	11.00"	-	10.50 "

	Wing Chord Max	Wing Side Dam Length Max	Wing Side Dam Height Max	Height Max
Front 1/10				
Rear 1/10	3.00"	3.50"	1.00"	4.00"
1/8	6.00"	6.50"	4.00"	6.00"
	36.00" sq. inches		4.50"	

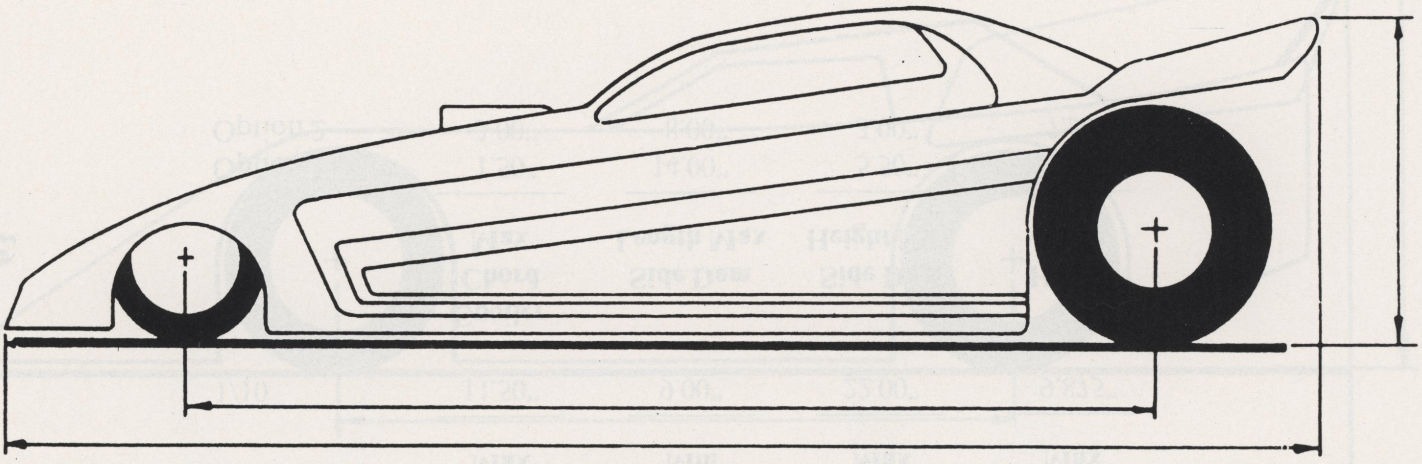


OUTLAW WEDGE

DIRT OVAL
OUTLAW WEDGE

	A Max	A Min	B Max	Width Max
1/10	11.50"	9.00"	22.00"	9.875"

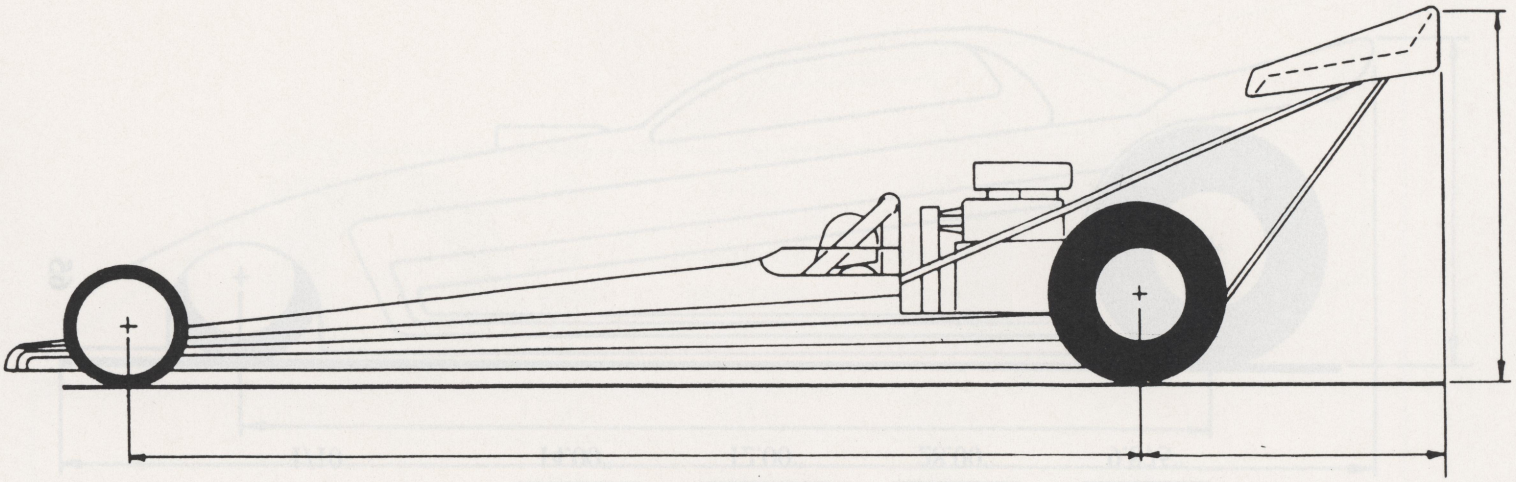
	Spoiler Chord Max	Side Dam Length Max	Side Dam Height Max	Height Max
Option 1	1.50"	14.00"	5.50"	10.00"
Option 2	3.00"	8.00"	3.00"	7.50"



FUNNY CAR

FUNNY CAR

	A Max	A Min	B Max	Width Max
1/10	14.00"	12.00"	28.00"	9.875"



DRAGSTER

DRAGSTER

	A Max	A Min	B Max	Width Max	Height Max
1/10	24.00"	16.00"	30.00"	9.875"	7.00"

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SANYO N-1200 scr

SANYO kr 1300

SANYO sce 1700

GATES G-Max (188/108)

GATES XP60

GATES

SAFT VR1.2

SAFT VE Cs

SAFT

VARTA RSH 1.2

VARTA RSQ 1

BERAC/Eveready 1.2AH

NATIONAL/Panasonic 1.2AH

PANASONIC 1400 scr

PANASONIC 1500 sce

PANASONIC 1700 scs

LEGAL MOTORS

1/10 & 1/12 APPROVED STOCK MOTORS

Yokomo "05" - *as imported by* Associated Electrics
Kyosho "20" - *as imported by Hobbico*
Kyosho "34" - *as imported by Hobbico*
Air Supply - *as imported by HPI & MRP*
Mabuchi 540 - *as imported by MRC/Tamiya*
Igarashi "05" - *various importers*
AYK Orange or Green endbell - *as imported by Race Prep*
Dymond #101, #102, #103, #104, & #105 - *as imported by United Models*
Trinity/Epic Monster Stock - *as imported by Trinity*
Speedworks Joel Johnson - *as imported by Trinity*
Parma Cyclone II - *as imported by Parma*
Team Altech (Black closed endbell version only)

ROAR 1/10 & 1/12 APPROVED MODIFIED MOTORS

Yokomo Espirit - *as imported by Associated Electrics*
Yokomo Turbo - *as imported by Associated Electrics*
Yokomo Reedy Ultrra Series - *as imported by Associated Electrics*
Air Supply "700" Series - *as imported by HPI*
Air Supply "100" Series - *as imported by HPI & MRP*
AYK - *as imported by Race Prep*
Mabuchi Techni Series - *as imported by MRC/Tamiya*
Dymond "05" Series - *as imported by United Models*
Kyosho Mega Series - *as imported by Hobbico*
Kyosho Le Mans Series - *as imported by Hobbico*
Checkpoint Platinum Series - *as manufactured by Checkpoint*
Fantom - *as manufactured by Fantom Motors*
Trinity/Epic - *as imported by Trinity*
Speedworks - *as imported by Trinity*
Parma Cyclone Series - *as imported by Parma*
Team Altech Open and closed endbell - *as imported by MRC*
LRP - *as imported by Du-Mor R/C*

ROAR APPROVED BODIES

1/10 SCALE

GTP

ANDY'S:
Porsche 962
Jaguar
Nissan 2X
Sauber Mercedes
Associated:
Jaguar XJR10
Toyota 89HF
Nissan 2X
Jaguar XJR
BOLINK:
Arundel
Nissan 2X
Porsche 962
BBR:
Lotec - BMW
Spice Fiero
DAHMS:
Firebird
McALLISTER:
Nissan 2X
Jaguar
Toyota
MRP:
Lamborghini/Tiga C-2
Corvette Lola
Sauber Mercedes
PARMA:
Porsche 962
Toyota GP C
TMS:
Nissan 2X

WINSTON CUP

ANDY'S:
89 Gran Prix
89 Thunderbird
90 Lumina
ASSOCIATED:
89 Thunderbird
90 Lumina (narrow oval)
BOLINK:
88 Pontiac
88 Thunderbird
88 Oldsmobile
88 Buick
89 Thunderbird
90 Lumina

90 Pontiac Gran Prix
90 LeBaron

McALLISTER:
88 Pontiac
89 Thunderbird
90 Lumina
88 Buick

MRP:
88 Thunderbird
86 Pontiac 2+2
86 Monte Carlo
88 Oldsmobile
89 Thunderbird
88 Pontiac
88 Buick
90 Lumina

PARMA:
86 Monte Carlo
86 Buick Regal
88 Oldsmobile
90 Lumina
90 LeBaron

INDY

BOLINK:
March 86-C Indy

MRP:
Lola 87 Indy

CAN AM

ANDY'S:
TOJ

ASSOCIATED:
Lola T 160

BOLINK:
Schkee
TOJ

MRP:
Intrepid

PARMA:
Osella

GT

ANDY'S:
Mercury Cougar
Nissan 300ZX

ASSOCIATED:
Chevy Beretta
Olds Cutlass

BOLINK:
Fiero
Greenwood Vette
Ferrari F40 Lemans
Merkur XR4TI
Mustang GT
Corvette

Datsun 280Z
Camaro IROC

CUSTOM WORKS:
Camaro IROC

McALLISTER:
Protofab Camaro

MRP:
Ferrari Testarossa

PARMA:
Ford Sierra
Porsche 944 Turbo IMSA

1/12 SCALE

WINSTON CUP

ANDY'S:
89 Gran Prix
90 Lumina
BOLINK:
83 Thunderbird
86 Buick LeSabre
88 Pontiac
89 Thunderbird
90 Lumina
McALLISTER:
86 Oldsmobile Stocker
86 Oldsmobile Fastback
88 Pontiac
MRP:
86 Monte Carlo
86 Buick Regal
PARMA:
83 Pontiac
86 Monte Carlo

CAN AM

ANDY'S:
TOJ
ASSOCIATED:
McLaren M20
Ferrari 312PB
Porsche 30KL
TOJ
McRae
Conquest BT1
Cooke Woods Lola
Skoal Bandit
Lola T160
BOLINK:
Porsche 917K
Elfin
CRC Chemical CAC-1
Spyder Can Am
Porsche J.L.R.
Schkee
McLaren M6-8B
Cheetah
Sigma
Shadow
BBR:
Chaparral 2H
CHECKPOINT:
TOJ 302SC
McALLISTER:
RM-1
MRP:
TOJ-BMW
Renault Turbo LeMans

Ampex Prophet
Frisbee
VDS 001
MCS Mark IV-812
PARMA:
March 802
Schkee
Oscella PA9
McLaren MGA-1
Tiga

GT

ANDY'S:
Nissan 300ZX
ASSOCIATED:
Pantera
Firebird Trans Am
Ligier Maserati
Ferrari Boxer 365
Ferrari Bellancanto
Chevy Beretta
BOLINK:
Carrera 935 Turbo
Mercedes 500 SLC
Mini Cooper
Lamborghini Countach
VW Sirocco
Porsche 935
Saab Turbo
Porsche Kremer
BMW 635 CSI
Renault RS Le Car
VW Golf
Datsun 280Z
Mazda RX7
Camaro 83 IMSA
Greenwood Corvette
Dodge Challenger
Porsche (Street)
Datsun 280Z
Datsun 240Z
Camaro IROC
Porsche Turbo
Ferrari F40
Monza
MRP:
Lotus Espirit
Hayoshi Dome
Ferrari 308 GTB
Zakspeed Mustang
Porsche 944
Fiero
Corvette 86
PARMA:
Greenwood Corvette
Corvette 84
Mercury Capri Trans Am

GTP

ANDY'S:
Jaguar
Toyota
Sauber Mercedes
ASSOCIATED:
Lola T600
Jaguar
Corvette
Mirage GrpC
BOLINK:
March 82G
Arundel C200
BBR:
Lotec BMW GrpC
Alba GrpC
McALLISTER:
Lola T610
March 8SG
MRP:
Ford C100
Lamborghini
Kremer CK5
PARMA:
Porsche
Mustang Probe

BMW

INDY

ASSOCIATED:
Coyote, Foyt Indy
Lotus 79 F1
Cosworth Brabham
Ferrari F1 Model 126
BOLINK:
Ferrari T2 F1
Penzoil Chaparral 2K
Chevron F1
MRP:
Renault F1
Penske PC9
PARMA:
Lola T700
Lola T900 Indy

1/8 SCALE

WINSTON CUP

MRP:
85T - Bird
85/86 Monte Carlo
86 Pontiac
Gran Prix 2+2
L & B:
90 Buick
Grand National
88 Oldsmobile

INDY

ASSOCIATED:
Tecno F1
Ferrari 312 B3 F1
Wolf F1
Lotus 79 F1
Longhorn Indy
Alfa 179D F1
MRP:
Renault F1
Penzoil Chaparral Indy
Lola T900 Indy
Penske PC12
PARMA:
Coyote Foyt
PB Lotus 80
Brabham BT 48

GT

ASSOCIATED:
Mustang Trans Am
Datsun 260Z
Porsche 911 Turbo
Greenwood Corvette
Ligier Maserati
Porsche 935 Turbo
Ferrari Boxer 365
Pantera
MRP:
VW Baja
Zakspeed Miller Mustang
Firebird Trans Am
Hayoshi Dome
PARMA:
Audi Quattro
Lancia GRP
Peugeot 205 Rally
Ford RS 200 Rally
Toyota

CAN AM

ASSOCIATED:

Porsche 917K
Ferrari 312P
V. D. S.
McLaren M20
Ferrari 312PB
Porsche 30KL
Matra MS690
Elfin
Cicale Ralt
Chevron B26

MRP:

Lola T310
Alfa 33
Sigma
Budweiser Spyder
TOJ-BMW
Prophet
Frisbee
Intrepid

PARMA:

Sorbello
VDS Lola 530
March 802
Lola

GTP

ASSOCIATED:

Jaguar

MRP:

Ford C100
Lamborghini

PARMA:

Porsche

Scale Concours Rules

The purpose of this set of rules is to establish a consistent basis for the judging of cars entered in each scale concours division.

Concours may be divided into two (2) divisions: Best Appearing and Concours d'Elegance. The Best Appearing category is for original designs and workmanship, not for copies of full size cars. The Concours d'Elegance category is for scale representation of full size race cars. Each scale shall be judged separately.

To qualify for their award, trophy winners in the Concours event must race their cars, for at least one lap in a main or qualifier following the judging. Any item attached to the body, that were used in the determination of a score, must remain on the car. (Wings, drivers, bodies, etc. can not be changed. Motors, tires, rims, batteries, etc. can be changed because they are not scored for points. Other items may be added, such as wings, spoilers, etc. as long as the car remains within the scale requirements.)

A committee of judges shall be used to determine the winner. A judge may not have a car entered in the concours division. Each judge shall independently score each car. At level 3 and 4 events a committee of three (3) judges shall be used to determine the wining cars. Each category shall be awarded a maximum of ten (10) points. A perfect car, in each category, would receive ten (10) points. The cars are scored based upon comparative judging from among all the entrants in that class and scale. Judges shall take into consideration the difficulty of hand painted and hand crafted parts verses store bought decals, stickers, tape, or other items. The highest scoring entry shall be determined the winner while the second highest scoring entry shall be awarded second place and so on until all the trophies have been awarded.

Ties shall be broken by choosing the car with the highest point total in a category. The order of selection is: 1) Overall Effect, 2) Detail, 3) Paint, and 4) Body Preparation.

Categories for Best Appearing

BODY PREPARATION

Is it neatly trimmed? Are the edges sanded and radiused? Are the wheel openings centered? Are the modifications made to the body inventive and well done?

PAINT

Does the paint bleed through in any areas? Multiple colors? Simple or complicated paint scheme?

DETAIL

Are the decals neatly trimmed? Are the decals hand painted? Are the decals on straight? Are there the right amount of decals? Is the driver's cockpit fully detailed? Is the interior painted?

OVERALL EFFECT

Does the package blend together well? Is it visually appealing or gaudy? Does the paint scheme fit the body style?

Categories for Concours d'Elegance

They are the same as the Best Appearing rules with the addition of:

AUTHENTICITY

Are photographic documents included? How does the entry compare to the document? Does the overall package blend well together? Are there any additional items included (ie, wheels, motors, mirrors, antennas, etc.)?

Winning cars are not allowed to compete in another ROAR Concours event.

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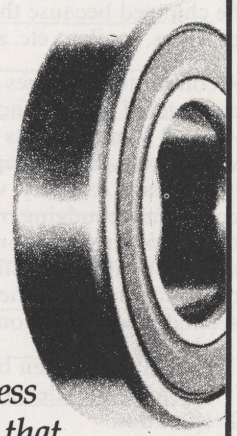

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CONCOURS JUDGING SCORE SHEET

Race _____ Date _____

Judge's Name _____

Class: _____ Best Appearing _____ (*)Concours d'Elegance

Scale: _____

Car # _____	Score (1-10)	Car # _____	Score (1-10)
Body Preparation	_____	Body Preparation	_____
Paint	_____	Paint	_____
Detail	_____	Detail	_____
Overall Effect	_____	Overall Effect	_____
(*)Authenticity	_____	(*)Authenticity	_____
TOTAL	_____	TOTAL	_____

Car # _____	Score (1-10)	Car # _____	Score (1-10)
Body Preparation	_____	Body Preparation	_____
Paint	_____	Paint	_____
Detail	_____	Detail	_____
Overall Effect	_____	Overall Effect	_____
(*)Authenticity	_____	(*)Authenticity	_____
TOTAL	_____	TOTAL	_____

Car # _____	Score (1-10)	Car # _____	Score (1-10)
Body Preparation	_____	Body Preparation	_____
Paint	_____	Paint	_____
Detail	_____	Detail	_____
Overall Effect	_____	Overall Effect	_____
(*)Authenticity	_____	(*)Authenticity	_____
TOTAL	_____	TOTAL	_____

Car # _____	Score (1-10)	Car # _____	Score (1-10)
Body Preparation	_____	Body Preparation	_____
Paint	_____	Paint	_____
Detail	_____	Detail	_____
Overall Effect	_____	Overall Effect	_____
(*)Authenticity	_____	(*)Authenticity	_____
TOTAL	_____	TOTAL	_____

OVERALL CONCOURS JUDGING SCORE SHEET

Race_____ Date _____

Scorekeeper's Name _____

Class: _____ Best Appearing _____ (*)Concours d'Elegance

Scale: _____

Car # _____	Score	Car # _____	Score
Judge #1	_____	Judge #1	_____
Judge #2	_____	Judge #2	_____
Judge #3	_____	Judge #3	_____
TOTAL	_____	TOTAL	_____

Car # _____	Score	Car # _____	Score
Judge #1	_____	Judge #1	_____
Judge #2	_____	Judge #2	_____
Judge #3	_____	Judge #3	_____
TOTAL	_____	TOTAL	_____

Car # _____	Score	Car # _____	Score
Judge #1	_____	Judge #1	_____
Judge #2	_____	Judge #2	_____
Judge #3	_____	Judge #3	_____
TOTAL	_____	TOTAL	_____

Car # _____	Score	Car # _____	Score
Judge #1	_____	Judge #1	_____
Judge #2	_____	Judge #2	_____
Judge #3	_____	Judge #3	_____
TOTAL	_____	TOTAL	_____

Car # _____	Score	Car # _____	Score
Judge #1	_____	Judge #1	_____
Judge #2	_____	Judge #2	_____
Judge #3	_____	Judge #3	_____
TOTAL	_____	TOTAL	_____

GENERAL LICENSING PROCEDURES AND PROCESSES

The General licensing concept is based on the idea of providing organized procedures and processes for local and regional ROAR sanctioned event.

Members that wish to participate on the National and International level require different licenses.

Participation at any ROAR sanctioned event will be by successful completion, return, and acceptance of an entry form.

SUPPORT CLASSES

All support classes at Level 5 events will be open to General License holders only. Masters and Formula categories are only for appropriate license holders.

At Level 3 and 4 events General license holders will race with Formula License holders in the Modified classes. This excludes General licensees from racing with Masters licensees.

At level 3, 4, or 5 events only General license holders will be allowed to participate in Stock classes. This excludes Formula and Masters licensees from racing Stock at these events.

PROVISIONS

General license may be up-graded to Formula and Masters license by filling the requirements of each license.

ROAR membership is required in addition to license.

License is good for all classes offered.

License does not guarantee entry into any event or class.

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and...
his faithful assistant...
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FORMULA LICENSING PROCEDURES AND PROCESSES

The Formula licensing concept is based on the idea that those members who wish to participate should be provided with organized procedures and processes for selecting qualified entrants into the ROAR Scale 1/12 Road, 1/10 Road, 1/10 Off-Road, 1/10 Dirt Oval, and 1/8 Gas Nationals.

Selection will be based on rank of licensed members from points earned in participation at previous Nationals, Regionals, and other Major events.

POINTS

Licensee's points earned are covered under Formula and Masters Points. Points are not retroactive.

Points may be calculated for the following classes at selected events: (a) 1/12 Modified Electric Road, (b) 1/10 Modified Electric Road, (c) 1/10 2 Wheel Modified Electric Off Road, (d) 1/10 4 Wheel Modified Electric Off Road, (e) 1/10 2 Wheel Modified Electric Dirt Oval, (f) 1/10 4 Wheel Modified Electric Dirt Oval, (g) 1/8 2 Wheel Gas, and (h) 1/8 4 Wheel Gas.

ACCUMULATED POINTS

Points may be accumulated, for classes listed under Points, on a best of three (3) basis during a rolling eighteen (18) month period. Only one (1) National event's points may be maintained in the class accumulated score.

NATIONAL SELECTION

Participation at the Nationals will be by invitation from the promoter and ROAR based on the number of open spots, prorated from the number of licensed racers in a scale classification, per class. Invitations are determined by the number of available slots being opened to the top points holders ninety (90) days prior to the National event. Invitees will submit a valid entry form within thirty (30) of the event after which all remaining slots will be filled by alternates. Alternates should submit an entry form at the same time as qualified entrants so that they may be selected should a qualified entrant fail to enter by the dead line. Each Regional Formula Champions will automatically be allocated one (1) slot if not already pre-qualified.

SUPPORT CLASSES

At the Nationals if Stock, Pan, or Sportsman classes are run in support, entrants will be selected by open format of General Licensed drivers. Entries received up until the deadline, date or number, will be allowed to participate.

Formula's ranked racers will not race in the Stock, Pan, or Sportsman classes at a Level 3, 4, or 5 event.

QUALIFYING AT THE NATIONALS

Qualifying race positions at the Nationals will be spread seeded based on points. Example: Two hundred fifty (250) entrants are entered with twenty five (25) heats of ten (10) drivers. The top twenty five (25) racers will be placed in different heats, the next twenty five (25) racers will be placed in different heats, and so on until all two hundred fifty (250) racers have been placed in a heat.

PROVISIONS

Points will only be awarded to current Formula licensed members. No license No points. Formula license is current for a calendar year period only. Members with current General License will have the expiration date adjusted to a December 31 expiration date. Previous year's points will not be used unless license is current. ROAR membership is required in addition to license.

Formula License may be upgraded to Master's License after petitioning the Executive Committee and completion of Master's License application.

Each license is good for two (2) classes as listed: Road -1/12 and 1/10 Modified Electric Road; Off-Road - 1/10 2 Wheel and 4 Wheel Modified Electric Off Road; Dirt Oval - 1/10 2 Wheel and 4 Wheel Modified Electric Dirt Oval; Gas - 1/8 2 Wheel and 4 Wheel Gas.

License does not guarantee entry into any event or class.

It should be noted that when the Executive Committee has determined that a previous point paying event was conducted in a manner that does not represent the best interests of this qualifying process, they may declare the event's points null and void. No right of appeal to this decision.

CAPPED TIRES FOR:

- RC-10 Rear: #0090
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MASTERS LICENSING PROCEDURES AND PROCESSES

The Masters licensing concept is based on the idea that those members who wish to participate should be provided with organized procedures and processes for selecting qualified entrants into the IFMAR World Championship and ROAR Nationals.

Selection will be based on rank of licensed members from points earned in participation at previous Nationals, Regionals, and other Major events.

POINTS

Licensee's points earned are covered under Formula and Masters Points. Points are not retroactive.

Points will be calculated for the following classes at selected events: (a) 1/12 and 1/10 Modified Electric Road, classes scored separately but best five (5) combined; (b) 1/10 2 and 4 Wheel Modified Electric Off Road, classes scored separately but best five (5) combined; (c) 1/10 2 and 4 Wheel Modified Electric Dirt Oval, classes scored separately but best five (5) combined, and (d) 1/8 4 Wheel Gas, best three (3) scores.

ACCUMULATED POINTS

Points may be accumulated, for classes listed under Points, during a rolling eighteen (18) month period. Only one (1) National event's points may be maintained per class in the accumulated score.

NATIONALS SELECTION

Participation at the Nationals will be by invitation from the promoter and ROAR based on the top fifty (50) ranked racers, in a scale classification, ninety (90) days prior to the National event. Invitees will submit a valid entry form within thirty (30) of the event after which all remaining slots will be filled by alternates. Alternates should submit an entry form at the same time as qualified entrants so that they may be selected should a qualified entrant fail to enter by the dead line.

SUPPORT CLASSES

All other classes are support classes and are operated under their own process and procedures.

Master's racers will race only in a Masters class at a level 4 or 5 event.

Master's racers may race in any Regional event that offers a Master's class regardless of Regional boundaries.

QUALIFYING AT THE NATIONALS

Qualifying race positions at the Nationals will be spread seeded based on points. Example: Fifty (50) entrants are entered with five (5) heats of ten (10) racers. The top five (5) racers will be placed in different heats, the next five (25) racers will be placed

in different heats, and so on until all fifty (50) racers have been placed in a heat.

MASTERS SELECTION AND APPLICATION

Based on past performance, racers will be invited to participate in the Master's class. Racers wishing to apply for a license will petition the Executive Committee after completion of the Masters License application which must contain signatures from two (2) current Masters licensed racers in the scale classification.

PROVISIONS

Points will only be awarded to current Masters Licensed members. No license No points. Masters license is current for a calendar year period only. Members with current general license will have the expiration date adjusted to a December 31 expiration date. Previous year's points will not be used unless license is current. ROAR membership is required in addition to license.

Each license is good for classes as listed: Road - 1/12 and 1/10 Modified Electric Road; Off-Road - 1/10 2 and 4 Wheel Modified Electric Off-Road; Dirt Oval - 1/10 2 and 4 Wheel Modified Electric Dirt Oval; Gas - 1/8 4 Wheel Gas.

License does not guarantee entry into any event or class.

It should be noted that when the Executive Committee has determined that a previous point paying event was conducted in a manner that does not represent the best interests of this qualifying process, they may declare the event's points null and void. No right of appeal to this decision.

FORMULA AND MASTERS POINTS

Licensee's points are earned by the following;

Finishing Points - Racers are awarded points based on finishing position. The winner will receive one thousand (1000) points at Level 5 events and eight hundred (800) points at Level 4 events. Each successive driver will receive one (1) less point. In order to tighten the points up, positions six (6) through ten (10), in each main, will receive the same number of points. The next main would begin with its winner receiving one (1) less point.

Example:

A Main	Level 5 Points	Level 4 Points
1st	1000	800
2nd	999	799
3rd	998	798
4th	997	797
5th	996	796
6th-	995	795
10th	995	795

B Main	Level 5 Points	Level 4 Points
1st	994	794
2nd	993	793
3rd	992	792
4th	991	791
5th	990	790
6th-	989	789
10th	989	789

C Main	Level 5 Points	Level 4 Points
1st	988	788
2nd	987	787
3rd	986	786
4th	985	785
5th	984	784
6th-	983	783
10th	983	783

D Main	Level 5 Points	Level 4 Points
1st	982	782
2nd	981	781
3rd	980	780
4th	979	779
5th	978	778
6th-	977	777
10th	977	777

etc.

In cases where a tie must be broken, ranking shall be: Level 5 finish, Level 5 qualifying position, Level 4 finish, Level 4 qualifying poistion.

PROTEST FORM
Property of ROAR

Race _____ Date _____

Class: _____ Heat: _____

ROAR #: _____ Racer's Name: _____

Protesting: Score _____ Procedure _____ Rule _____

Statement: _____

_____

_____

_____

_____

Race Director: _____ Time: _____

Ruling: _____

Reason: _____

_____

_____

_____

Protested to ROAR _____ yes

Ruling: _____

Reason: _____

_____

_____

_____

Authority: _____

TERMINOLOGY

Barrier: Device used to keep racing vehicles contained to the racing surface.

Black Flag: Visual or audio indication by the Race Director of a race vehicle or driver infraction.

Bulletins: Official bulletins are written releases from ROAR which change General or Technical specifications, rules, and/or regulations. ROAR memos, newsletters, product approval forms and Rev-Up are considered official ROAR bulletins.

Chief Scorer: The person designated with scoring responsibilities by maintaining accurate timing and lap counting, keeping the Starter informed of the race progress, and ensuring the proper reporting of results.

Class: Vehicles in a category may be grouped in classes. The classes for which a vehicle is qualified may be determined by motor type, body type, number of cells, driver skill, vehicle specification, or any other method listed in the ROAR rules or the supplemental regulations for the event in which the vehicle is entered. Classes may be combined at the discretion of ROAR to expedite race schedules.

Contestant: An entrant who is participating in a race.

Corner Cutting: An infraction where the corner of a turn is cut short by driving off of the racing surface.

Disqualification: Administrative means of penalizing and expelling an entrant through discontinuing any and all reference as an entrant.

Driver's Meeting: A meeting conducted by the Race Officials prior to the start or a race or event.

Enduro: A race whose time is extended beyond the length listed in each scale specification that requires pit stops to re-power the race car or cause a change is race vehicle.

Entrant: A individual whose entry is accepted for an event.

Entry Application: A form supplied to prospective entrants. Entry applications must be completed as printed with no additions or deletions.

Executive Committee: Committee designated by the ROAR By-Laws with the administrative and operational powers of the organization.

Event: An entire program of races.

Event Committee: Group assigned by ROAR to make final decisions regarding operations at an event.

Finish Line: Designated line constituting the completion of the race.

Four-wheel Drive Vehicle: A self propelled land vehicle that has no more than four wheels which contact the course surface in at least two distinct tracks. The vehicle must be capable of being driven by four wheels.

Frequency: The frequency assigned to a entrant for use in a designated class.

Frequency Director: The person designated to supervise frequency control and transmitter impound.

Grid Position: Position assigned by the Starter to an entrant's car.

Hot Pit: An area outside of the working pit and the racing area where a car's engine may be started while the vehicle is on the ground.

Impound: A specific location with limited personnel access designated for the containment of all race vehicles prior to and immediately following an race.

Jump Start: Starting prior to the approved time.

Level 1 Event: Local club event.
Level 2 Event: Regional event.
Level 3 Event: Major event or Regional Championship not designated as a points paying event.
Level 4 Event: Regional Championship or a major event designated as a points paying event.
Level 5 Event: National or World Championship event.

Multiple speed transmission: Any device capable of changing the final drive ratio while the car is in motion.

Perimeter: Outer portion of racing area.

Pit: Area outside the racing area designated for working on cars.

Pit Crew: The individual(s) associated with an entrant to help with assigned tasks.

Pit Steward: Official designated to monitor pit activity.

Promoter: Individual or group responsible for organizing and promoting an event.

Protest: Act of filing a written claim of rule infraction.

Race: A contest between one or more vehicles that are competing against the clock, or between two or more vehicles that are competing directly against each other.

Race Central: Headquarters for the race officials and subsequent coordination of race activities.

Race Director: The person designated to be in charge of the event by supervising activities and making race decisions.

Racer: An entrant participating in a race or class.

Region Director: ROAR official covering specified geographic areas.

Registrar: The person designated with the record keeping of entrants, collecting of fees, verification of ROAR membership, etc.

Rev-Up: ROAR's official magazine.

Ride Height: Static position of the car when dropped from a height of 6". All measurements should be taken at ride height.

R.O.A.R. (ROAR): Radio Operated Auto Racing, Incorporated.

ROAR Official: The individual assigned by ROAR with the responsibilities of the event.

Rules: Rules stated herein are specifically defined and as such are firm, not subject to individual interpretation.

Sanction: The documentary authority granted by ROAR to organize and conduct an event.

Short coursing: An infraction where a portion of the track has been cut short.

Starter: The person designated to start and stop each race.

Starting Line: Designated line constituting the start of the race.

Straight Axle Design: Motor, gears or sprockets, and differential must be included in the unsprung weight of the vehicle. Rear suspension must be a straight axle with a fixed relationship between the axle and the motor while allowing no relative transition and/or rotation between the rear axle bearings and the motor case.

Supplemental Regulations: Regulations which are normally consistent with the ROAR rules and which define special or additional rules for a specific event.

Technical Advisor(s): Those ROAR officials designated to make technical rule compliance decisions.

Technical Event Committee: Those individuals assigned by ROAR with making event technical rule compliance decisions.

Technical Director: The person designated to ascertain, by visually examination, that vehicles entered in an event comply with the competition and supplemental regulations for the event.

Track Steward: The person designated to monitor starts, conduct of the racers and individual cars, etc.

Track Operator: Individual or group holding the land or facility options on the racing grounds.

Transmission: A series of three or more gears resulting in the ratio change of the final drive.

Transmitter: Any device emitting a radio frequency.

Turn Marshall: An entrant's responsibility of correcting vehicle disruptions during a race.

Two-wheel Front Drive Vehicle: A self propelled land vehicle that has no more than four wheels which contact the course surface in at least two distinct tracks. The vehicle may be propelled by no more than two front wheels. Classed to run as a four-wheel drive vehicle.

Two-wheel Rear Drive Vehicle: A self propelled land vehicle that has no more than four wheels which contact the course surface in at least two distinct tracks. The vehicle may be propelled by no more than two rear wheels.

Weight: Shall be considered race ready or post race weight of vehicle without the

transponder. Official weight will be considered weight shown on official scales.

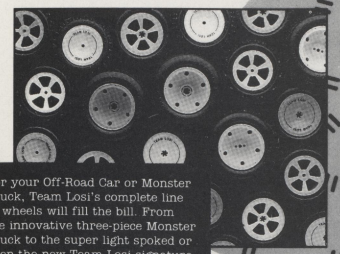
Wheel Base: Distance between centerlines of front and rear axles. Measurement taken with car at ride height.

Width: Measurement taken at point(s) affording the maximum overall dimension with car at ride height.

Working Pit: An area outside the main racing surface where repairs are made to vehicles participating in a race.

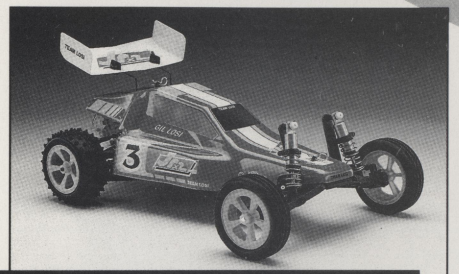
Team Losi

CHOICE OF CHAMPIONS



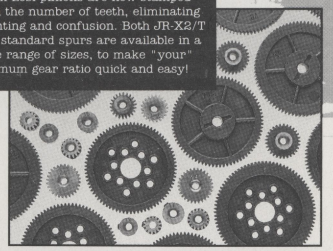
For your Off-Road Car or Monster Truck, Team Losi's complete line of wheels will fill the bill. From the innovative three-piece Monster Truck to the super light spoked or even the new Team Losi signature rim, Team Losi wheels will be part of what makes you a winner!

NATURALS from Team Losi are the ultimate connection between your car and the racing surface. These race-proven, natural rubber tires have been individually developed and constructed to deliver optimum traction and handling under any track condition!



The JR-X2 is the product of years of R/C car racing experience. Many of the things that helped Gil Losi Jr. win 4 World Championships have gone into the production of the JR-X2. The JR-X2's highly developed and tested design will help you to be successful against the toughest competition!

Team Losi pinions are now stamped with the number of teeth, eliminating counting and confusion. Both JR-X2/T and standard spurs are available in a wide range of sizes, to make "your" optimum gear ratio quick and easy!



When performance counts, Team Losi's Stock and Modified Off-Road, On-Road and Monster Truck Revolution racing motors deliver! Constantly tested and manufactured with the highest quality materials and workmanship, these are motors you can rely on.

The JR-XT has won more races while being driven by more different drivers than any other Monster Truck ever made! By utilizing race proven JR-X2 technology, this truck has been engineered and built to be a relentless winner "right out of the box". See for yourself why the JR-XT swept the 1990 R.O.A.R. Nationals, and take your best shot at the winners circle!

TEAM LOSI PERFORMANCE

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